fueloil & oil heat

APRIL 1960

★ ★ ★ EDITION

38 Years devoted to Progress in Oilheating and Airconditioning

How to ✱ tell 'em nice

NFC Conference looks at Promotion

Deliver ✱ what We Sell

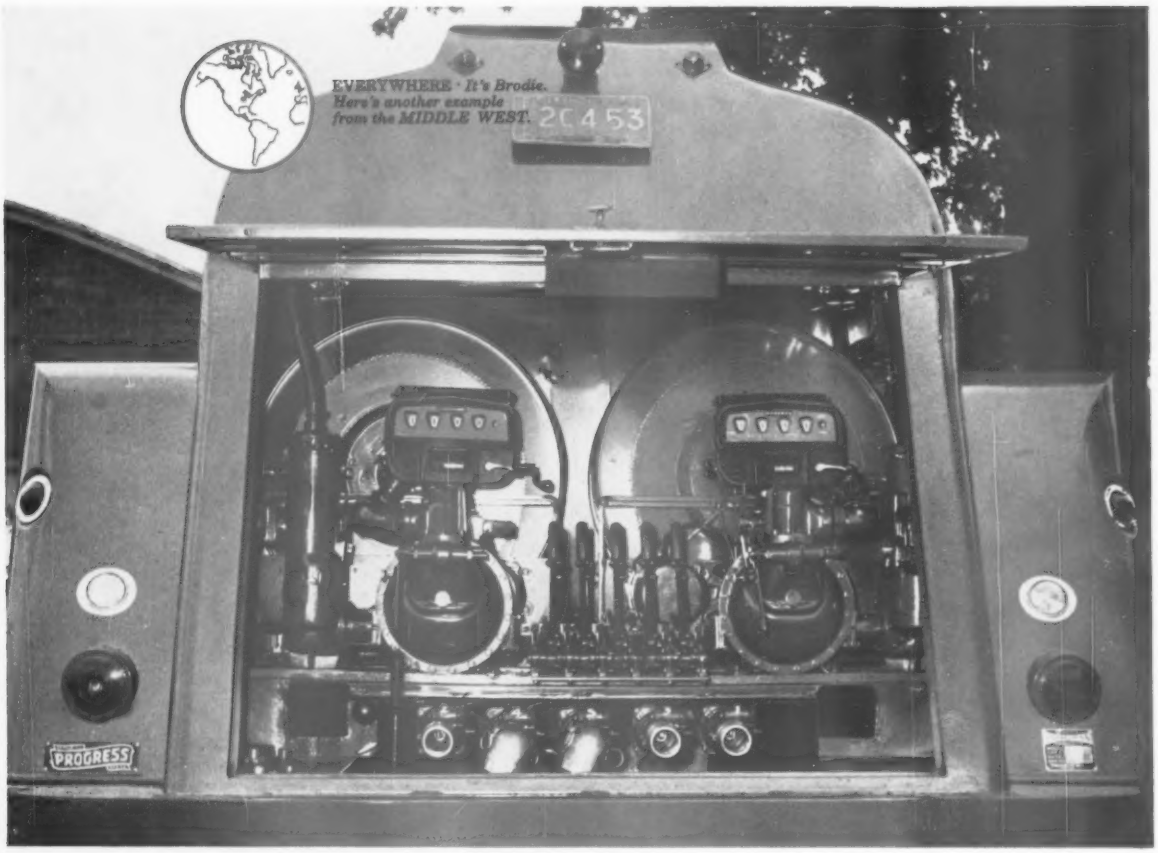
HEP Program gives first-class Oilheating

Throttle ✱ Control for Trucks

Device speeds up oil Deliveries

Oilburners ✱ operating by States

How BRODIE Dual Meters Pay for Themselves



Brodie right and left hand *BiRotors* speed delivery by Progress-built tank trucks

When every minute on the road counts—when downtime means dollars lost, Brodie dual *BiRotors* pay for themselves in time-saving economies: by saving extra trips to plant for products, and by having both products immediately available. In addition, dual *BiRotors* reassure both supplier and customer by eliminating product contamination in split load delivery.

Dual *BiRotors* have been widely used by Progress Mfg. Co., one of the largest builders of tank trucks, because they combine space economy with high sustained accuracy and minimum downtime . . . the result of Brodie's vibration-free design and double case construction which protects the measuring element from road shock and external damage.

006

RALPH N. BRODIE COMPANY
San Leandro, California, U.S.A.
CABLE ADDRESS: "BRODICO"

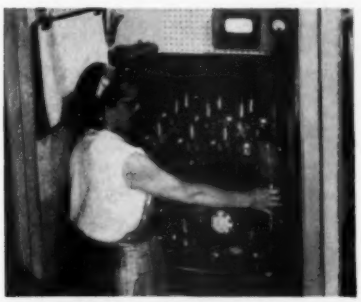
MT. VERNON, N.Y., 550 So. Columbus Ave.
DALLAS 7, TEXAS, 167 Parkhouse St.
SEATTLE 9, WASH., 221-9th Ave. N.
CHICAGO OFFICE: 1227 Circle Ave., Forest Park, Ill.
LOS ANGELES 22, CALIF., 5401 Sheila Street

BRODIE
METERS-VALVES

REPRESENTATIVES WITH STOCKS AND SERVICE FACILITIES IN ALL PRINCIPAL CITIES

RELY-ABILITY

More than 250 million individual inspections have kept Sundstrand fuel units leaders in reliable performance



Throughout machining and after assembly every Sundstrand fuel unit is thoroughly checked. Drive shafts must be round to within two ten-thousandths of an inch. Pump shaft seals, lapped flat to twenty-two one-millionths of an inch, are checked under optical flats.

Relationships between rotor housing, crescent, rotor, and roller are gauged on comparators graduated to fifty-millionths of an inch. Once assembled, each unit is individually tested for capacity, efficiency, pressure regulation, cutoff, power consumption, quietness, etc.

Over the years a total of more than 250 million separate inspections have been made on Sundstrand fuel unit parts and assemblies.

These "extra" measures that are standard at Sundstrand assure fuel units with parts matched and mated as accurately as those in a fine watch. For more details ask for Bulletins 1102 and 1106.

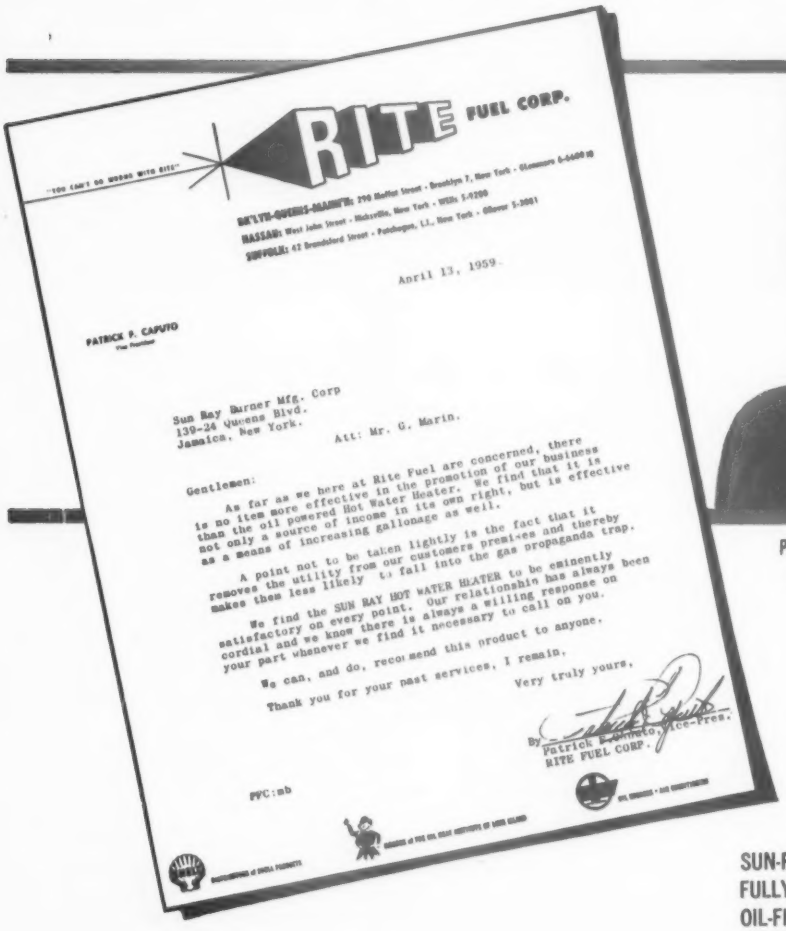
SUNDSTRAND HYDRAULICS

DIVISION OF SUNDSTRAND CORPORATION

2210 Harrison Ave., Rockford, Ill. — Eastern Sales Office: 89 Summit Ave., Summit, N. J. Made in Canada by John Inglis, Ltd., 14 Strachan Ave., Toronto; in Sweden by Sundstrand Hydraulic AB Stockholm; in France by R. S. Stockvis, et Fils, S. A, 20-22 Rue Des Petits-Hotels, Paris

SUNDSTRAND

"We find the SUN-RAY OIL-FIRED WATER HEATER *to be eminently satisfactory on every point"*



RITE FUEL CORP.

"YOU CAN'T GO WRONG WITH RITE"

BE'LYN-QUEENS-MANH'TN: 290 Moffat Street · Brooklyn 7, New York · Glenmore 6-6600 ®
NASSAU: West John Street · Hicksville, New York · WIlls 1-9200
SUFFOLK: 42 Brentsford Street · Patchogue, L.I., New York · GRover 5-3051

April 13, 1959.

PATRICK P. CAPUTO
Vice President

Sun Ray Burner Mfg. Corp
139-24 Queens Blvd.
Jamaica, New York.

Att: Mr. G. Marin.

Gentlemen:

As far as we here at Rite Fuel are concerned, there is no item more effective in the promotion of our business than the oil powered Hot Water Heater. We find that it is not only a source of income in its own right, but is effective as a means of increasing gallonage as well.

A point not to be taken lightly is the fact that it removes the utility from our customers premises and thereby makes them less likely to fall into the gas propaganda trap.

We find the SUN RAY HOT WATER HEATER to be eminently satisfactory on every point. Our relationship has always been cordial and we know there is always a willing response on your part whenever we find it necessary to call on you.

We can, and do, recommend this product to anyone.

Thank you for your past services, I remain,

Very truly yours,

By Patrick P. Caputo, Vice-Pres.
RITE FUEL CORP.

PPC:mb

PATRICK F. CAPUTO

SUN-RAY FULLY AUTOMATIC OIL-FIRED WATER HEATER

- **4½ times the recovery rate of gas water heaters**
- **8½ times the recovery rate of electric water heaters**

Up to 180 gallons per hour — 100°F. temperature rise

COPPER MODELS—30, 45 and 65 gallon sizes

GLASS LINED MODELS—30, 50 and 70 gallon sizes

15 YEAR WARRANTEE ON COPPER MODELS

10 YEAR WARRANTEE ON GLASS LINED MODELS

SUN-RAY BURNER MANUFACTURING CORP.

139-24 QUEENS BOULEVARD · JAMAICA 35, N. Y.

APRIL fueloil & oilheat 1960

VOLUME 19 NUMBER 4

Editorial, circulation and advertising Office: 2 West 45th St., New York 36, N. Y.

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Among other things . . .

At Atlantic City on March 10 and 11 representatives of nearly all the oilheating promotion campaigns being conducted through the National Fueloil Council gathered for a workshop conference.

Local oilheating dealer, association or advertising agency people participated in panel discussions, delineating how they handle oilheating advertising in their areas. The flavor of some of the imaginative and dynamic thinking that contributed to the success of the Conference begins on page 43.

Cover photo: George Gruberg, left, and Everett Elliott look over a Smithsonian Institution exhibit loaned for showing at Oil Heat Institute meetings and conferences. Gruberg is counsel for the Institute. Elliott has his own oilheating dealership in Danvers, Mass., is a vice-chairman of OHI's Distribution Division and headed that organizations Convention Committee for the April 4 to 7 meeting in New York.

ATLANTIC CITY in early March may seem an odd place for a large industry gathering, especially with snow piled high along the edges of the streets. So when the National Fueloil Council chose that spot for its seventh two-day Promotional Conference there were some raised eyebrows here and there.

Yet it was the most successful conference held by the group to date, which means in the past five years. The truth is that this unorthodox location was chosen just because the NFC folks wanted this to be an unusually successful deal.

Now that the program has grown large, with over $2 million spent in 1959, and a forecast of over $3 million in 1960, the large oil companies that supply half the funds through NFC are asking more questions about how the money is being invested in the local campaigns.

By enticing these major oil officials to leave their sacred precincts in New York, Philadelphia, Pittsburgh, Chicago and such spots, it was possible to gain their undivided attention to the many phases of the program, a thing never achieved before. At the earlier New York conferences the major oil men had put in appearances for one session or possibly a luncheon and then been called back to duty. But after Atlantic City they really know what their money goes for.

Apparently they were pleased, some said they were floored by the impact of it all. The individuals from the campaigns over the country who put on the panel shows on 15 separate phases of the work certainly did themselves proud. Their penetration of the subjects impressed the experts from the advertising agencies who came with their clients.

One oil man's reaction . . . J. L. Minner of Shell, and board chairman of NFC . . . was shown by his remark that while the dealers and refiners invested two million last year in a harmonious joint venture, he looks forward to the time when we'll provide several times that much.

IN THE FEATURE section of this issue is a brief description of the work of all the panels. One interesting item not on a presentation was a water heating gimmick developed for the York, Pa., campaign. They cemented two pennies onto a lapel pin framework. These are worn by everyone active in the fueloil and oilheating business. Folks naturally ask what it's about, and they're told that this much per day will supply them all the hot water they can use if oil is the fuel.

THE AMERICAN GAS ASS'N. has included in its research program an item of $300,000 to seek a substitute for natural gas. For much less than that some of us could tell 'em—try fueloil. Which reminds us that one Connecticut gas utility has bought its own fueloil company, probably so that it can be "neutral" in advising prospective heating customers.

GEORGE MAURER of Griffin Fuel Co., Seattle, was showing us a letter that's worth quoting, as follows:

"This letter is in recognition of a most considerate and courteous act on the part of one of your drivers. The other day my mother's nurse was trying to help her into a car to give her a brief outing. She was having some difficulty when one of your drivers appeared and asked if he could help.

"He was not delivering oil at the moment. I can only identify him as a big nice looking fellow with the name "Dom" on his jacket."

Maurer explains that the driver's name is Dom Tarabochia. Fueloil drivers are often very helpful but we don't often learn of the details.

THE QUESTION of newspaper publicity on fueloil price changes is with us again. This time it was a change in the New York area. The publicity releases said that the price of No. 2 oil had been reduced to 14.1¢ and this was carried in suburban as well as the city papers.

In Westchester County, the city's northern bedroom, the new prices were 14.5 to 14.8¢, not 14.1¢ as reported. So the fueloil distributors had to get busy on the local newspapers of the county to run corrections the next day—a messy business at best, and giving twice the public emphasis to fueloil costs. The industry as a whole, particularly the marketers, have been unhappy for a long time over publicity given to price changes, since otherwise the public pays little or no attention to fuel costs as long as they're "affordable."

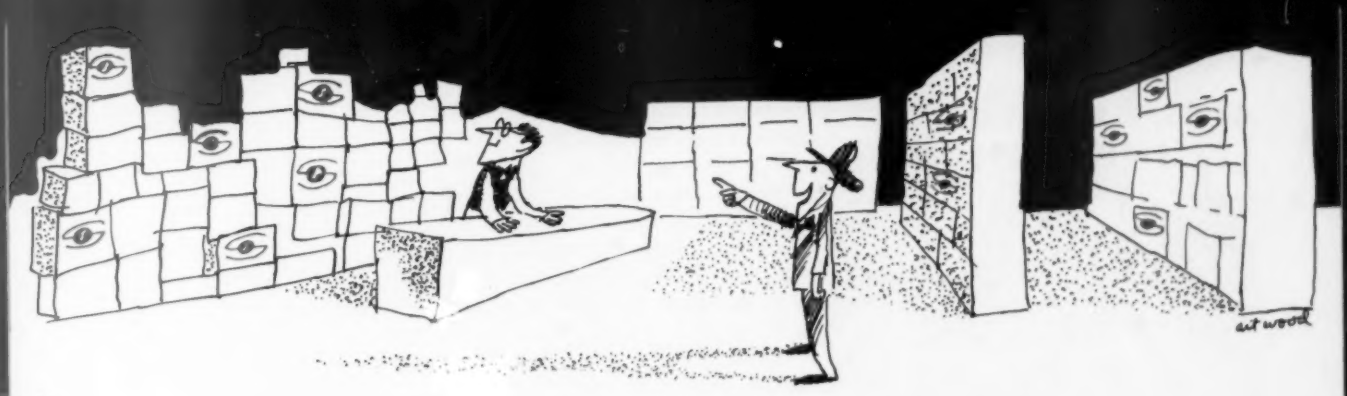
AT A FEBRUARY convention of the National Rural Electric Cooperative Assn. Mr. Ralph Lipps of the Corn Belt Power Cooperative, Humboldt, Iowa, had a topic, "We're hot on electric Heat."

He explained that his company will only guarantee satisfaction and provide the special rate for heating when the owner has complied with nine points in preparing his house for heating.

These are: 1) All insulation with a K factor of .27 or less; 2) Careful application of the insulation; 3) Vapor barriers, although these in some instances are omitted from ceilings for air circulation; 4) Storm windows and doors; 5) Weatherstrip all windows and doors; 6) Caulk all windows and doors; 7) Effective ventilation of attic and crawl spaces; 8) Polyethylene cover under crawl space; 9) Humidistat for automatic control of humidity inside the house.

Putting electric heat in a leaky house is as silly, in his opinion, as putting permanent antifreeze in a leaky radiator.

If the oilheating industry took half as much interest in the thermal efficiency of the homes it heats, they'd be hauling oil away instead of delivering it. And talk about having to overcome sales resistance . . . the electric boys do it the hard way, but the point is they're getting it done in growing volume.



BE SURE IT'S SCULLY

Don't be misled by the claims or first costs of other available products. Whether you order a single petroleum delivery product or an entire, time-proven system, be assured that SCULLY has made it as efficient as modern engineering permits. There are no short-cuts to better value and long, trouble-free service.

For example, after years of dependable service for hundreds of petroleum distributors, the Scully UNIFIL System is still unchallenged as the fastest, most complete and most reliable tight connection method. The first company to adopt the UNIFIL System has yet to replace a single Adaptor.

NOZZLE CONNECTOR
Spark-Safe,
Non-Ferrous

ALL-WEATHER CAP
With Your
Company Name

TYPICAL ADAPTOR
Over 25 Types
Available

VENTALARM Signal
Model LA, For
New Installations

PROTECTED
RESONANCE
CHAMBER
A SCULLY Feature

VENTALARM Gauge
Combination
Money-Saver

The features of the Scully VENTALARM Signal and VENTALARM Gauge, now installed in over half our oil-heated homes, have made possible safe, efficient automatic delivery. The protected resonance chamber, for instance, exclusive with SCULLY, gives complete protection of the signal, yet maintains the necessary free venting area.

The SCULLY delivery system has advantages and profits for you that are far ahead of any competitor's single product.

Investigate other component parts of the SCULLY petroleum delivery system: Type COM Nozzle, VENTAFIL Portable Fill, Vent and Signal, SCULMATIC Nozzle Control, SCULTROL Pump Pressure Control, and SCULLY Safety Vent Cap.

For More Information call Collect NOrmandy 5-3900, or Write to SCULLY Signal Company, Dept. C MELROSE 76, MASSACHUSETTS.

SCULLY SIGNAL COMPANY
MELROSE 76, MASSACHUSETTS
IN CANADA: E. S. Gallagher Sales, Ltd., 10 Hafis Rd., Toronto, Ontario

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by James M. Collins

WASHINGTON—The "national fuels policy" pot is boiling again in Washington, with indications that the coal industry might win its battle in Congress for establishment of a joint congressional committee, whose job it would be to hold extensive hearings on the U. S. fuels situation—and then recommend a "policy," implemented with new laws if necessary.

The drive behind this comes from coal men who have two principal objectives in mind for policy determination by Congress. The first is to prohibit "dump sales" of natural gas by pipelines or distributors to industrial consumers in the off-peak seasons of the year, when the demand by homeowners and commercial consumers has petered out during the warm summer months. The other objective is the imposition of statutory controls, specifically, on oil imports, particularly residual fueloil.

The coal men already have driven a big wedge into the solid ranks of opposition to this Congressional study, within the petroleum industry. Now, some independent producer groups are favoring the study—apparently believing that they have more to gain than to lose. The producers' main objective, of course, is to get Congress to pass legislation that will eliminate direct, utility-type, control of their gas prices by the Federal government, through the Federal Power Commission. And, producers, of course, would prefer action by Congress on oil imports, to the present "administrative" control program, set up by the Eisenhower Administration.

Latest move in the fuels policy battle was a closed-doors conference, called by Chairman Murray (D, Montana) of the Senate Interior Committee a few days ago of all representatives of oil, gas, coal, and gas pipeline and distributor associations in Washington. Pressure has been applied to Murray (whose committee favorably reported a fuels resolution last September, now in the Senate Rules Committee) to get this program moving. Murray made it clear that there will be a resolution sent to the Senate floor for action. Originally, this resolution (S-Con-Res-73) was co-sponsored by 43 senators. It remains to be seen now how many will sponsor the new resolution—which has been rewritten to eliminate some language which oil men had claimed would lead to "end-use" controls of fuels. The coal industry has quickly agreed to the new resolution, knowing that it can make the case just as well before the committee to be set up.

Most likely, this resolution will pass in the Senate. But, it will not count for anything, unless a companion resolution is also passed in the House. There, the resolution (H-Con-Res-397) has been tabled by the Rules Committee, temporarily, at least. But, if the coal industry succeeds in obtaining Senate passage, the pressure will be heavy in the House to take the same action.

If the independent oil producers support the solution now (against the opposition by major oil companies), the chances are very good some kind of congressional fuels committee will be set up. Hearings before this group, and its report next year, might prove to be the most crucial action dealing with fuels in Washington in many years. But, it is highly problematical whether the petroleum industry would come off in better shape than it now enjoys. Much pressure will be exerted by consumer area congressmen, and senators, for more public control of oil and gas—prices, tax benefits, imports, etc. Long-voiced fears that the petroleum industry has been edging closer and closer to a public utility status and control, over the past decade, are being heard again now. The chances are such a situation will not develop, through a congressional investigation, but it is difficult to see what good such a probe can do for the petroleum industry, already deeply troubled by a continuous oversupply of crude and products (due, in large part, to the natural gas situation, it is true).

Gas Bill Discussions Held

Meanwhile, independent producer groups are conferring over the redraft of a gas bill, patterned after the Harris Bill that has been pending for more than a year in the House Commerce Committee without any action on it. In their work, producers are ignoring the gas pipelines. Final result may be designed to obtain aid of the coal industry (on "dump" sales) and angled at getting support from consumers, through the gas distributors. Pattern is following advice by top officials in the Eisenhower Administration, that the industry should take the lead in drawing up a bill, and that it must have provisions that guarantee consumer "protection."

Whether the Administration will support the final bill remains to be seen. Even if President Eisenhower should back it, the bill has no chance of passage during the present Congress.

Tighter Control Is Feared

Some top officials, however, fear that there is a rising tide of opposition to present gas prices among consumer groups, that may result in even tighter control of producer prices, and rates charged by pipelines and distributors. The object, some officials believe, will be to drive gas prices down to the lowest level that is possible, on the basis of "costs"—with consumers ignoring, or unaware of, the long-term economic necessity for some increase now in gas prices, particularly, at the well, in order to provide needed incentives to maintain gas discoveries, to meet ever-increasing consumer demands for gas. If this consumer drive, evident through programs in state commissions to battle every FPC-approved gas price increase, should be successful in the courts and in Congress, the result could be extremely unfavorable for the oil industry. Economists note that the price for gas now is actually "too low," when compared with the prices for equivalent energy from oil or coal.

ICEDALE, PA.—Storage for 1¼ million gallons of Sunheat; 2 metered loading racks; high-speed pumps, and modern filters.

OWOSSO, MICH.—Storage for 4½ million gallons of heating oil; 4 metered loading racks; high-speed pumps, and modern filters.

New terminals pipe Sunheat into "backyards" of many Michigan, Pennsylvania distributors

SUNHEAT is on the move! In 1959, new terminals and refining units were built, old ones modernized, many distributors added.

Icedale (20 miles south of Reading), on Marcus Hook's pipeline, and Owosso (25 miles west of Flint), fed by Sun's pipeline from Toledo, are typical new facilities. For dual distributors, Owosso also has 3 huge gasoline storage tanks.

Exclusive distributorships for SUNHEAT, the quality-blended heating oil, are still open in these and many other areas. Get all the facts on Sun's co-op advertising plan . . . merchandising aids . . . practical business help.

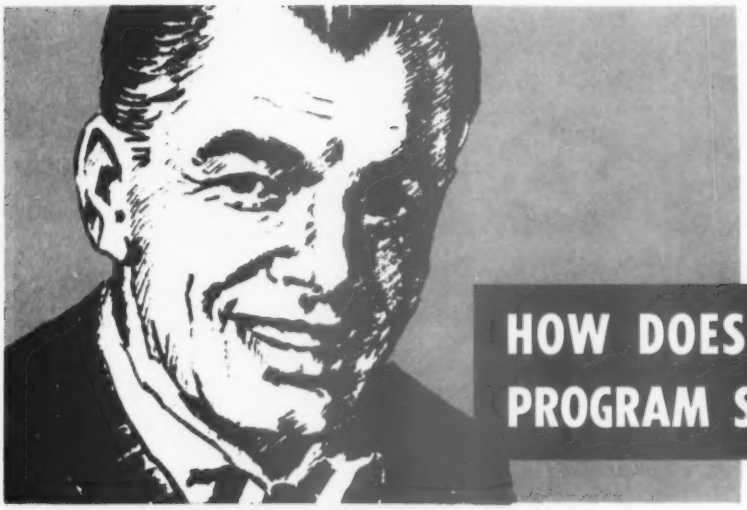
Write to Fuel Oil Department, SUN OIL COMPANY, 1608 Walnut Street, Philadelphia 3, Pa. *All* inquiries will be *confidential*.

Visit Sun's booth at the National Oil Heat and Air Conditioning Exposition, April 4-7, New York Coliseum.

SUNHEAT

MAKERS OF FAMOUS CUSTOM-BLENDED BLUE SUNOCO GASOLINES

fuel oil & oilheat



HOW DOES YOUR PRESENT PROGRAM STACK-UP WITH...

HEIL'S 1960 DISTRIBUTOR PROFIT PROTECTION PLAN...

AIR CONDITIONING...

A COMPLETE LINE OF HEIL SUMMER AIR CONDITIONING UNITS IS NOW AVAILABLE WITH HEIL CENTRAL HEATING SYSTEMS.

TRAINING...

INSTALLATION AND SERVICE SCHOOLS, CONTACT HEIL-QUAKER FOR NEXT AVAILABLE SCHOOL.

Aggressive thinking and action is the keynote of heating equipment distributors during the sizzling '60's. If you think you've got a good program now, then you owe it to yourself to check HEIL'S 1960 DISTRIBUTOR PROFIT PROTECTION PLAN. HEIL knows you, the distributor, and your dealers must have a "Better Than Competition" sales and merchandising program to insure your share of our growing industry.

Does your present program offer "Double-Extended" dating to protect your working capital? Does it have consumer campaigns designed to bring customers to your dealers? Is it all encompassing enough to include a co-op merchandising fund, new construction discounts, powerful direct mail programs, promotion kits and competitive prices? HEIL offers you all this and more in their 1960 Distributor Profit Protection Plan.

ACT TODAY . . . CONTACT HEIL-QUAKER CORPORATION FOR MORE COMPLETE DETAILS AND TAKE THE ADVANTAGE IN YOUR TERRITORY. PRICE, PROFIT AND PROTECTION IS HEIL'S THEME FOR ITS DISTRIBUTORS IN 1960!

THESE 14 DISTRIBUTORS, WITH AN ESTIMATED SALES VOLUME OF $50,000,000 ACCEPTED HEIL'S 1960 PROFIT PROTECTION PROGRAM:

MAJOR APPLIANCE CO. — OMAHA, NEBRASKA
APEX SUPPLY — ATLANTA, GEORGIA
FLARAPCO, INC. — MIAMI, FLORIDA
CORKEN SUPPLY — COVINGTON, KENTUCKY & CINCINNATI, OHIO
CAPITOL FURNACE & STOVE REPAIR, INDIANAPOLIS, IND.
TENN-YORK SUPPLY — NASHVILLE, TENNESSEE
BUCHAN SUPPLY — N. WILKESBORO, NORTH CAR.
CASHAWAY PLUMBING & HEATING — BALDWIN, MICH.
NICHOLAS SUPPLY — JACKSON, MISSISSIPPI
GEORGE EMRICH — COLUMBUS, OHIO
WELCO SUPPLY — ST. LOUIS, MISSOURI
GLADWIN CASH & CARRY — GLADWIN, MICHIGAN
QUICK FURNACE & SUPPLY — DES MOINES, IOWA
C. R. VISNER COMPANY — GRAND RAPIDS, MICHIGAN

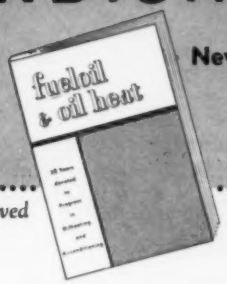
ATTENTION DEALERS IN THE ABOVE LISTED TERRITORIES . . . CONTACT YOUR HEIL DISTRIBUTOR FOR A SALES, ADVERTISING AND MERCHANDISING PROGRAM THAT IS READY TO GO.

HEIL
UNIFORM HEATING-COOLING

HEIL-QUAKER Corporation
647 THOMPSON LANE • NASHVILLE, TENNESSEE

Oilheating & Airconditioning
MERCHANDISING NEWS

2 West 45th Street New York 36, N. Y.



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Monthly oilheating Trends

FEBRUARY INSTALLATIONS of domestic oilheating equipment were just 1% above a year ago, and seem to have arrested for a time a very nice growth rate of the past several months. The estimate is 35,997 installations compared with 35,691 last year.

The installations were divided: new homes, 12,857; replacements of old oilheating, 14,512 and conversions from other fuels 8,628.

For the first two months, total installations were approximately 83,974 compared with 79,708 last year, up 5%. The two month totals were divided: new homes, 28,464 this year against 25,973 last year; replacements 36,395 compared with 33,904; conversions from other fuels, 19,115 vs. 19,831.

During February, oilheating dealers sold an estimated 701 complete airconditioning systems and 1,637 pressure burner water heaters. Considering the very marked superiority of oilfired water heaters over other types, the sales figures remain too low. Maybe this year will see the industry giving it more emphasis.

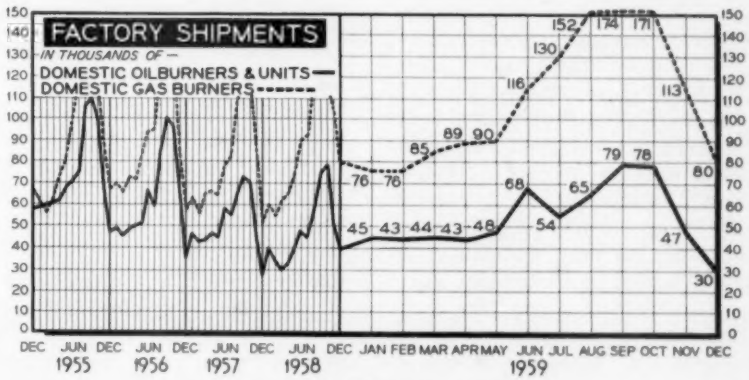
The few individual dealers who have done a real promotion on water heaters including house to house selling have, in general, been highly pleased with their results. Of course, they often may sell water heaters primarily to switch an oil account to themselves. Even so it helps the industry in the long run.

Stocks: At the end of February, dealers were holding in stock 64,604 domestic oilburners and complete units compared with 54,819 a month earlier and almost the same as the figure 64,484 a year earlier. In other words, they have been building inventory ahead of sales which may be a good thing since they can often get better prices at this normally slack season.

The February 29 stocks were divided: separate burners, 28,426; boiler-burner units, 11,629, furnace-burner units, 24,549.

Factory stocks at the end of December were 40,360 compared with 38,276 the previous year.

Tank stocks: At the close of February, dealers were holding 34,444 customer oil tanks compared with 31,477 a month earlier and 21,875 at the end of February last year. By sizes these stocks were divided: 220-330 gal., 31,795; sizes 550-675 gal., 1,714 and sizes 1,000 gal. or larger 935.



Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than those reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	DECEMBER			TWELVE MONTHS		
	1959	1958	Percent Change*	1959	1958	Percent Change*
Separate Burners	20,620	26,480	—22.1	451,479	372,557	+21.2
Boiler Burners	2,166	2,538	—14.7	48,625	47,409	+ 2.6
Furnace Burners	6,877	11,033	—37.7	144,870	152,446	— 5.0
All Domestic	29,663	40,051	—25.9	644,974	572,412	+12.7
Commercial	3,351	2,785	+20.3	41,844	36,225	+15.5
Total	33,014	42,836	—22.9	686,818	608,637	+12.8

*The 1959 figures are not directly comparable to 1958 since the Census Bureau changed its base from which total shipments are estimated by them.

February Minimum Retail Prices Key Dealers

	Feb. Avg.	Jan. Avg.
Separate Burners	$314	$316
Boiler Burners	747	747
Furnace Burners	624	626

Price Index: Separate Burners 1947-49 is 100%

WHOLESALE

February	94.8	Six months ago	94.9
January	94.8	Year ago	95.9

RETAIL

February	91.5	Six months ago	92.2
January	92.0	Year ago	92.7

Are joint service Organizations logical for some oil Markets?

BACK around the time of World War II, quite a number of cooperatively or jointly owned service organizations came into being to look after the equipment of fueloil customers where individual oil companies did not handle mechanical work. The large majority of these companies faded out in a few years.

The trouble seemed to be that they lacked adequate control by the oil companies to the point where the management was inclined to overdo the job to bring in more revenue. Only a handful of such servicing organizations have continued through the years up to now, and these have grown strong in most instances and have done a fine job.

Revived Interest

In the past two or three years, the idea of starting such joint ventures has come to the front again and is being investigated in quite a few markets. This is particularly apparent in smaller markets where the average oil company has too few customers to afford a good service department.

The reporting group this month was asked various questions on this problem. First, we find that 11% of the companies know of one or more cooperative or joint service companies operating in their general areas. The range was from none to 14% by geographic areas.

The next question brought interesting figures. The average joint service company is taking care of the customers of five fueloil companies and the average total number of customers handled by such a service organization is 2,435.

However, there's a considerable feeling among the reporting companies that these joint organizations lack quite a bit in capability or quality. Exactly one-third of the group believes that such shops serve the customers well, and two-thirds say that they do not.

Then moving their thinking over to the oil companies that are being taken care of by such joint ventures, our group estimates that only 30% of them are happy with the arrangement and 70% are not.

In the opinion of the total reporting companies the joint or cooperative set-ups charge about the same rates as individual service departments in 54% of the instances.

In stating their opinion as to how such operators charge for service, 54% of the group estimate this to be about the same as the individual service departments; 40% of the men believe that such companies charge too much or about a third more than private departments charge; the remaining 6% believe that the joint companies charge an average 10% less than do the individual company departments.

Apparently about three-fourths of these joint service companies operate in the name of the oil company that is their client in all contacts with the customer including billing for charges. In this way, there's always an opportunity to check the charges if complaints start showing up.

The final question in this series asked the group if they felt that a joint service company is a good answer for communities where the individual oil companies are small. The score was 53% yes; and 47% no.

In other words, quite a number of the companies that do not think well of joint operations in several details still vote affirmatively when they think of the small market.

Interesting comments this month are these:

"We believe that a foster parent cannot take the place of the real parents—each company should take care of its own customers." . . . "I have never felt that divided responsibility ever gave the customer the service to which he is entitled. Only by keeping the whole problem under one roof can you ever hope to control this situation. There are several small companies in our area—some have only one or two servicemen, yet these men truly represent their companies. Service can get an account or lose one—it is best handled at home." . . .

"In this area, a service company is privately-owned and works for perhaps four or five oil companies." . . . "We have never gotten satisfactory results when we have sub-contracted service work." . . .

Independent Servicemen

"There are a few individuals doing service work for small fueloil distributors, but this is generally unsatisfactory. The set-up does not help the oil industry as the customers certainly are at the mercy of a very independent serviceman, and the service he offers is at his convenience." . . .

"The only joint ventures with servicemen in our city are engaged in by a very few small under-the-fill resellers." . . . "I believe that this cooperative approach to service is the one way to bring service costs into line and to avoid the numerous service organizations in each little company every few miles of distribution."

"An independent service organization must realize a profit to succeed; in order to retain our oil accounts and also to deter gas heat we must provide direct service and sustain a loss." . . . "I don't think that a cooperative service organization will work anywhere—it seems to me (human nature being what it is) the customers will not get the service they expect and we as an industry will lose accounts. At this moment, we have our own service and control it to our satisfaction." . . .

"The oil company today must give complete service or get out for the good of the whole industry. Now that we have seen the light I would not let any other service company go near our customers if I could help it." . . .

"Cooperative service is basically a sound idea, but there is still a flaw in not having complete control over your customers." . . .

"It is inconceivable to me that joint service companies could survive over the long pull." . . .

Where is the

New home Market?

	No. of Permits Issued	
	Dec.	12 Mos.
Alabama	654	17,863
Arizona	1,762	20,652
Arkansas	257	3,726
California	16,103	231,749
Colorado	1,820	15,398
Connecticut	970	16,979
Delaware	68	1,717
District of Columbia	275	10,678
Florida	6,069	81,226
Georgia	1,406	21,210
Idaho	139	1,972
Illinois	2,237	54,124
Indiana	1,061	18,548
Iowa	367	8,176
Kansas	758	6,359
Kentucky	413	9,108
Louisiana	1,056	16,542
Maine	38	1,224
Maryland	1,418	27,602
Massachusetts	1,442	21,900
Michigan	1,628	37,506
Minnesota	868	18,508
Mississippi	180	3,114
Missouri	1,518	24,804
Montana	81	1,836
Nebraska	391	6,763
Nevada	234	3,373
New Hampshire	51	1,780
New Jersey	2,365	35,958
New Mexico	414	8,192
New York	4,832	98,345
North Carolina	919	14,022
North Dakota	58	2,594
Ohio	2,183	49,471
Oklahoma	556	9,834
Oregon	506	8,584
Pennsylvania	1,774	37,346
Rhode Island	206	2,750
South Carolina	239	4,319
South Dakota	130	1,939
Tennessee	1,387	18,271
Texas	4,307	69,224
Utah	415	8,285
Vermont	13	781
Virginia	1,875	29,822
Washington	988	21,520
West Virginia	144	3,656
Wisconsin	1,029	19,200
Wyoming	110	1,768

Greater detail on permits within the individual states is included in a booklet, "New Dwelling Units authorized by local Building Permits," issued monthly by the Bureau of the Census, U. S. Dept. of Commerce, Washington 25, D. C.

Chase Manhattan Analyst examines gas Competition

by John B. Winger*

THE POSTWAR PERIOD has seen the use of oil and natural gas for space heating grow at an average rate of 8% a year. But the over-all space heating market in this period was growing at a rate of only 2½% annually. The petroleum hydrocarbons were able to grow almost four times faster than the market because they were displacing coal. At the end of World War II, coal was used to satisfy 60% of the heating market; but now coal's share is only 10%.

It is obvious that oil and gas do not have much more to gain at the expense of coal. And their combined growth in the future cannot significantly exceed the expansion of the space heating market. But the impact of this transition from rapid to slow growth falls much more heavily on oil than on gas. By virtue of its regulated status, gas is provided a distinct competitive advantage over oil. This, coupled with a more aggressive, effective promotional effort, has in recent years permitted gas to capture the lion's share of the growth in the space heating market; the past five years have seen gas grow more than twice as fast as oil. Conceivably, if sufficient gas is made available, the use of oil for space heating may eventually go into a phase of decline.

In size, the space heating market is extremely important; it constitutes 20% of the total primary energy market. And it is the equivalent of almost 4½ million barrels of oil per day. That, in turn, is equal to 45% of the current over-all demand for oil. So when oil loses much of the growth of this market to gas, the impact is substantial. And it is also broad. Allowable schedules, crude oil production rates, refinery rates, pipeline movements, and tanker shipments are all affected. For every barrel of heating oil that is displaced by gas in the market place, one less barrel of crude oil needs to be produced, transported and refined.

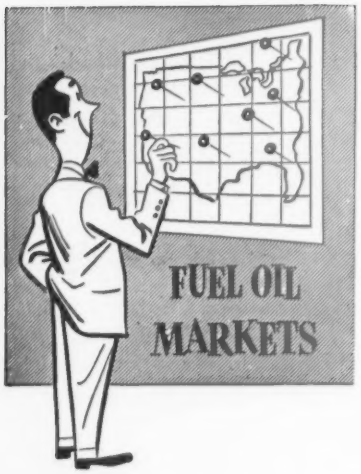
If it is the petroleum industry's determination to continue expanding the output of gas at the current rate, there should be a recognition that a slower growth of crude oil production and refinery runs is an inevitable consequence. And forward planning should be reconciled to this development. But there is evidence that such recognition has not occurred. The current condition of oversupply is one manifestation of the lack of such recognition.

It has been said that the excess of inventories this season was caused by mild weather. For some months this was true, but there were offsetting cold months, and the heating season through February was only fractionally warmer than normal. So we cannot explain away the stock excess for reasons of weather. It may develop that March's exceptionally severe weather will provide substantial inventory relief. But that won't alter the basic fact that the growth of normal demand for heating oils is diminishing, and supplies need to be tailored accordingly.

The impact of gas, of course, is not confined to the space heating market. Of the total primary energy market, which is now the equivalent of 21 million barrels of oil per day, natural gas and fueloils compete with one another for a portion that is equal to 16 million barrels a day. How this competitive race is developing is revealed by these statistics: since 1956, the combined domestic demand for all fueloils—light and heavy—has increased by less than 1% a year; in sharp contrast, the use of gas has risen by 5¼% a year. Had the demand for fueloils grown at the rate of 5¼% a year, the demand for crude oil in 1959 would have averaged half a million barrels a day higher than it did.

The fueloils constitute 40% of the total oil demand. And when so large a segment of demand almost ceases to grow, there are broad repercussions which cannot be ignored by conservation bodies, producers, importers, and refiners. But the industry's production schedules and resulting persistent oversupply suggest that the loss of markets to gas is being overlooked.

*Vice-president, Chase Manhattan Bank, Petroleum Dept., Economics Div., New York, N. Y.



THE FIRST HALF of March has been a real help to the fueloil season by building up degree-days in some of the larger markets almost to the level of a normal season.

At the end of February as shown by the table here, the Eastern states had fewer than normal degree-days by 5.7%, and fewer than last season by 11%. The Midwest showed 1.1% more than normal degree-days; and 2.8% fewer than last year. For the total area East of the Rockies, the season to February 29 had an average, weighted by markets, 3.7% warmer than normal and 8.5% warmer than last year.

The primary stock table shows March 18 with only 8% more oil than a year ago while last month it had been up 38%. The cold and windy March helped a lot.

Prices throughout the East were down pretty generally by .8¢ on March 10 compared to a month earlier at both the tank car and tank wagon levels. Throughout the Midwest the changes were irregular ranging from a half-cent on the low side up to a full cent at Milwaukee.

Distillate Fueloils

PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	Mar. 18 1960	*Mar. 20 1959*
East Coast	28,584	27,927
Midwest	23,584	20,656
Gulf Coast	17,042	15,332
Total	69,210	63,915

*American Petroleum Institute.

No. 2 Heating Oil
(Including No. 3 & PS200)

Price per gallon as of March 10, 1960

	Tank Car†	*Tank Wagon*
Portland, Me.	9.7	14.3
Boston	9.5	14.1
Providence	9.6	13.9
Hartford	9.85	13.9
New Haven	9.5	14.0
Syracuse	10.8	14.3
Albany	9.7	13.6
New York	9.5	13.6
Newark	9.5	13.5
Philadelphia	9.5	13.7
Baltimore	9.5	13.8
Wilmington, N. C.	9.8	13.4
Washington	9.8	14.1
Richmond	10.1	13.5
Charleston, S. C.	9.8	13.3
Chicago	9.25*	13.6
Detroit	10.95*	15.6
Cleveland	11.6*	15.6
Minneapolis	9.929	15.2
St. Louis	9.6*	14.4
Indianapolis	10.39*	15.4
Milwaukee	9.725*	14.9
Des Moines	11.15	15.3
San Francisco	12.05*	14.8
Portland, Ore.	12.10*	15.1
Seattle	12.20*	15.2
Spokane	13.80*	16.8
Los Angeles	11.55*	14.3

Tank wagon prices shown are for maximum one-time delivery discounts.

*Delivered.

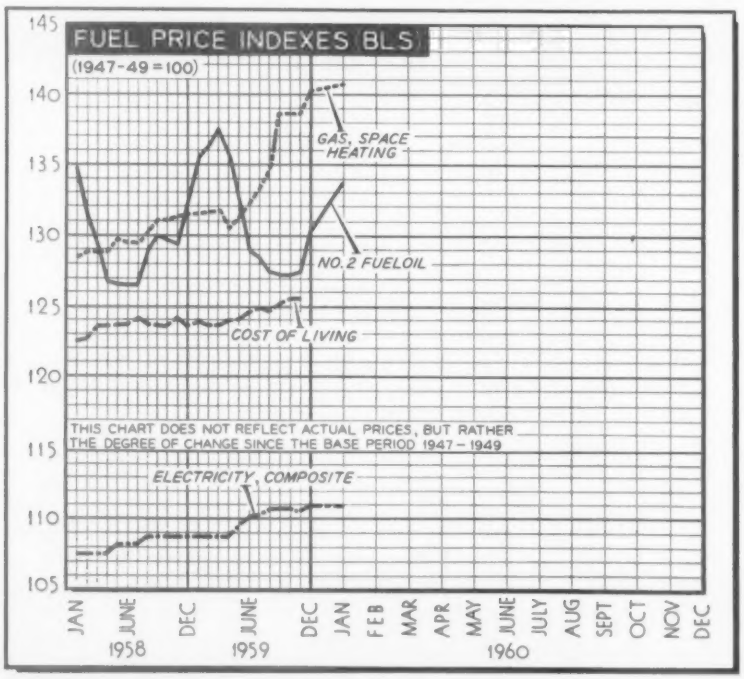
†Tank car prices are typically those paid by fueloil distributors as a purchase price. On the West Coast, this term more often indicates a retail sale to a large commercial account. This usually is a half cent below the tank wagon price.

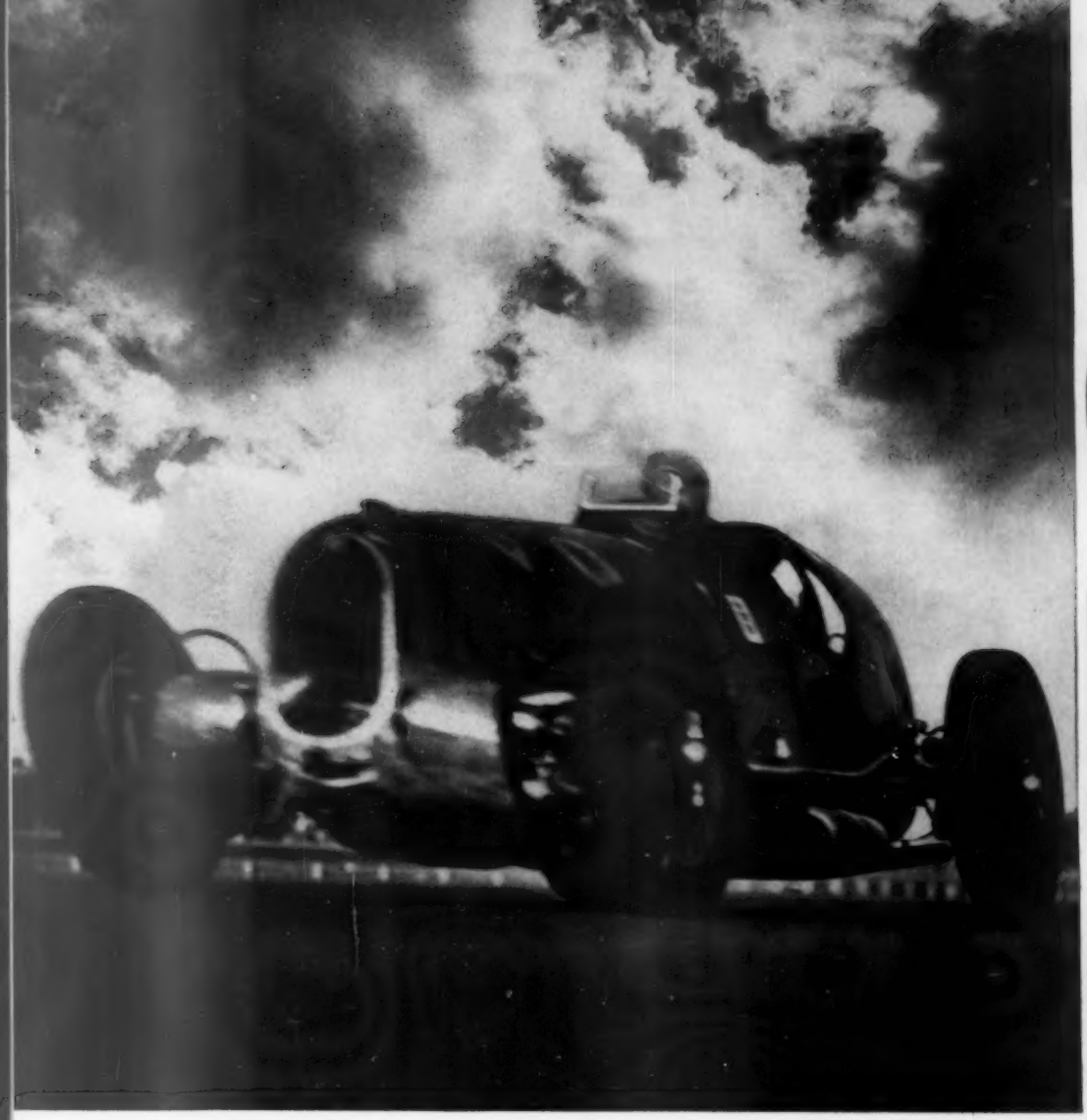
Degree Day Table

Sept. 1-Feb. 29

	Norm.	*'59-'60*	*Percent Change**
Albany AP	5056	4808	— 4.9
Atlanta AP	2269	2346	+ 3.4
Baltimore CO	3193	3082	— 3.5
Boston AP	4123	3797	— 7.9
Buffalo AP	4777	4563	— 4.5
Charlotte, N.C. AP	2555	2545	— 0.4
Chicago AP	4648	4574	— 1.6
Cincinnati CO	3465	3725	+ 7.5
Cleveland AP	4322	4151	— 4.0
Dallas AP	1909	2221	+16.3
Denver AP	4397	4710	+ 7.1
Des Moines AP	4877	5261	+ 7.9
Detroit AP	4600	4469	— 2.8
Grand Rapids AP	5038	4857	— 3.6
Hartford AP	4494	4407	— 1.9
Helena AP	5881	6048	+ 2.8
Houston AP	1168	1479	+26.6
Indianapolis AP	4201	4282	+ 1.9
Kansas City AP	3811	3970	+ 4.2
Los Angeles CO	1023	713	—30.3
Louisville AP	3444	3392	— 1.5
Milwaukee AP	5089	5163	+ 1.4
Minneapolis AP	5862	5871	+ 0.1
New Orleans CO	993	1378	+38.8
New York CO	3670	3468	— 5.5
Omaha AP	1114	5108	+ 8.0
Philadelphia CO	3394	3213	— 5.3
Pittsburgh CO	3761	3652	— 2.9
Portland, Me. AP	5367	4892	— 8.9
Portland, Ore. CO	2985	4240	+42.0
Providence AP	4339	4008	— 7.6
Roanoke, Va. AP	3194	3251	+ 1.8
St. Louis AP	3642	3804	+ 4.4
Salt Lake City AP	4358	4809	+10.3
San Francisco CO	1679	1329	—20.8
Sault Ste. Marie AP	6369	6136	— 3.7
Seattle CO	3037	2978	— 1.9
Toledo AP	4617	4641	+ 0.5
Washington AP	3304	3062	— 7.3

*Compared with normal.





HARTOL

FRONT RUNNER...

Keeping out-in-front when the going's tough . . . that's what separates the Champs from the drop-outs on the track, or in today's competitive fuel oil business. For over three decades top independents have found that the decision to do business with HARTOL has helped them come in "in the money" at the end of the heating season. HARTOL provides 17 convenient, modern terminals, storage for peak operation, and dependability under all conditions. Get the greatest service story in the entire industry from your HARTOL representative.

- Largest independent marketer of gasoline and fuel oil on the Eastern Seaboard.
- First in experience . . . cooperation with independent jobbers and dealers . . . ability to serve.

HEATING OILS • GASOLINE • KEROSENE

HARTOL PETROLEUM CORPORATION
50 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

CLEAN UP
starts with good tools
--Get 'em at Sid Harvey's

HARVEY FURNACE VACUUM CLEANERS
The cleaner with plenty of horsepower to give you the suction you need. Two inside dust bags gives you better filtering action and positive protection against costly blow-outs.

ATTACHMENTS & SPARE PARTS
for Doyle, G-E, Kent, Nu-Vac, Premier, Pullman, Super Suction and Tornado.

COMPLETE WITH ATTACHMENTS

Harvey Jr.	$ 99.50
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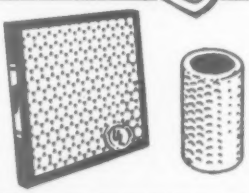
FURNACE & DUCT BRUSHES
Nothing gets stubborn soot and scale like the proper brush. Sid Harvey's has a wide choice to choose from.

SOOT GUNS & SOOT DESTROYERS
Get the places that brushes and vacuum cleaners can't reach. Sid Harvey's soot destroyer is SAFE, FAST, ECONOMICAL and EASY TO USE.

DUST MASK
Your health is important....Guard against dirt and soot with a dust mask. Self-adjustable for perfect fit with washable filter element.

FILTERS
Filters for oil burners and filters for air ducts needs changing too. Sid Harvey's has the make and sizes you need.



GET CLEAN-UP TIME
Sid Harvey's latest booklet lists these and other essential tools and supplies needed for clean-up. Write for your copy. It's FREE to the trade.

AVAILABLE AT ALL SID HARVEY STORES

SID HARVEY INC.
VALLEY STREAM NEW YORK

Names in the News

J. David Hopkins has been elected vice president in charge of sales, Delavan Manufacturing Co., West Des Moines, Ia. Since January 1959, he has been the company's general sales manager. Before that he was Southwest regional manager for General Electric.

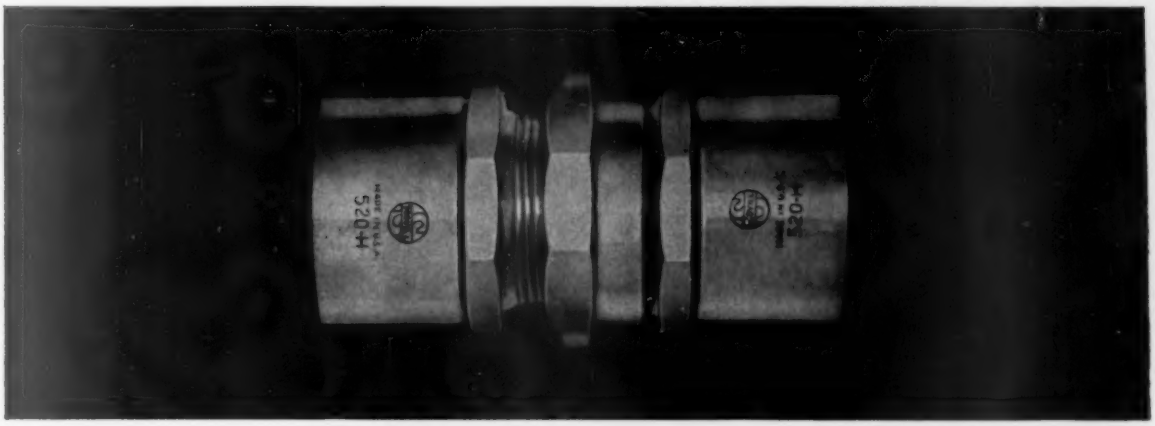
Darwin W. Ferguson has been elected president and director, Sun Oil Co., Ltd., Toronto, Canada. He had been manager of Sun's Southeastern sales region at Jacksonville, Fla. He succeeds Wilburn T. Askew who has returned to the parent company in Philadelphia as a newly-elected vice president.

Hundley joins Fueloil as advertising sales Manager

IT HAS been jointly announced by Wm. Steinen Mfg. Co. and FUELOIL & OIL HEAT that Robert W. Hundley joined the magazine as advertising sales manager on March 31. Well known in the oil-heating industry, Hundley has been with Steinen for the past eight years. Previously, he had been with Delco Appliance Division, General Motors Corp.

Hundley

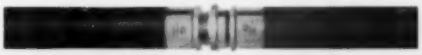
Lee Steedle, formerly advertising sales manager, is now associated with McCall's magazine in the New York area.



SCOVILL'S NEW 1 3/8" FUEL OIL COUPLING MEETS ALL 3 VITAL REQUIREMENTS!

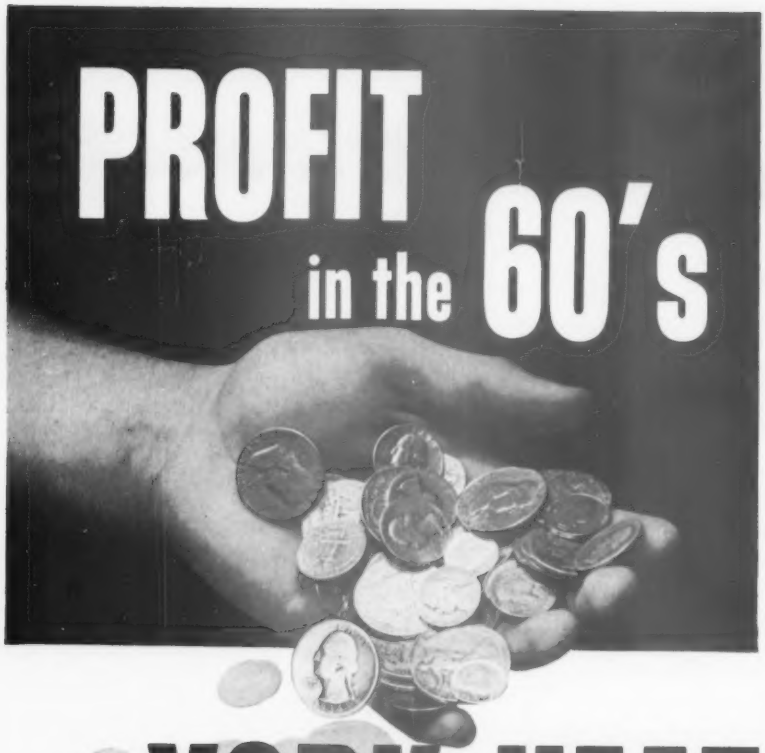
Before you re-order fuel oil couplings, it will pay to match their performance against these 3 vital requirements. Here's how Scovill meets them . . .

1 *Do they offer economical, trouble-free operation?* Scovill was the first to design and manufacture couplings for modern hose—and is, today, the nation's leading supplier of fuel oil and gas pump couplings. Scovill has more first-hand, practical knowledge on correct application, use and maintenance of hose couplings than any other supplier. The new 1 3/8" coupling by Scovill has positive, permanent anchorage. Its ferrules are of high strength, cold drawn copper alloy with straight sides that parallel the hose body. Both sections have wide octagonal facets for tightening with ordinary wrenches. Scovill's Full-Flow design permits uninterrupted flow and assures mechanical strength of entire assembly. 2 *Are they available for immediate delivery?* Scovill maintains the industry's widest network of sales offices and warehousing facilities. A full stock of couplings is always on hand —from 3/4" to 3" in fuel oil couplings . . . and all standard sizes in gas pump couplings. All orders for couplings are shipped without delay anywhere in the U. S. or Canada! 3 *Is fast service and expert advice available?* Scovill maintains the largest—and finest—sales force in the industry; they are ready to serve you when and where you want. *For details, write: Scovill Manufacturing Company, Industrial Couplings Division, Waterbury 20, Conn.*



Hose couplings by **SCOVILL**

MAIN OFFICE: 99 MILL STREET, WATERBURY, CONN. • CLEVELAND: 4635 W. 160TH ST. • GREENSBORO: 1108 EAST WENDOVER AVENUE • HOUSTON: 2323 UNIVERSITY BLVD.
SAN FRANCISCO: 434 BRANNAN STREET • TORONTO: 334 KING STREET, EAST



with YORK-HEAT

Proved Products — York-Heat oil-fired boilers and furnaces have for more than 40 years been regarded as the highest quality products for automatic heating.

New Products — Now York-Heat engineers have developed new *gas-fired boilers and furnaces skillfully designed* for market needs, priced competitively, and styled for the 60's.

Old Friends — York-Heat equipment has for years been used by the nation's largest builders. These men buy quality products—products that will deliver years of trouble free operation for the buyers of their homes.

New Friends — York-Heat's distributing organization is growing rapidly, but good protected territories remain available for distributors and dealers who are interested in profitable business in the 60's.

Write today for details.

YORK 4h HEAT

YORK-SHIPLEY, inc.

Pioneer and Specialists in Automatic Heat

Boilers to 600 Hp.
Furnaces to 5 Million B.t.u.h.

YORK, PENNSYLVANIA

George Dorland has been appointed sales manager, Roper Hydraulics, Inc., Commerce, Georgia. Before joining Roper in 1957, he was a salesman for an industrial supply house and before that an industrial engineer for a large manufacturer. Dorland will supervise the field sales force of 23 district sales offices in the United States and Canada.

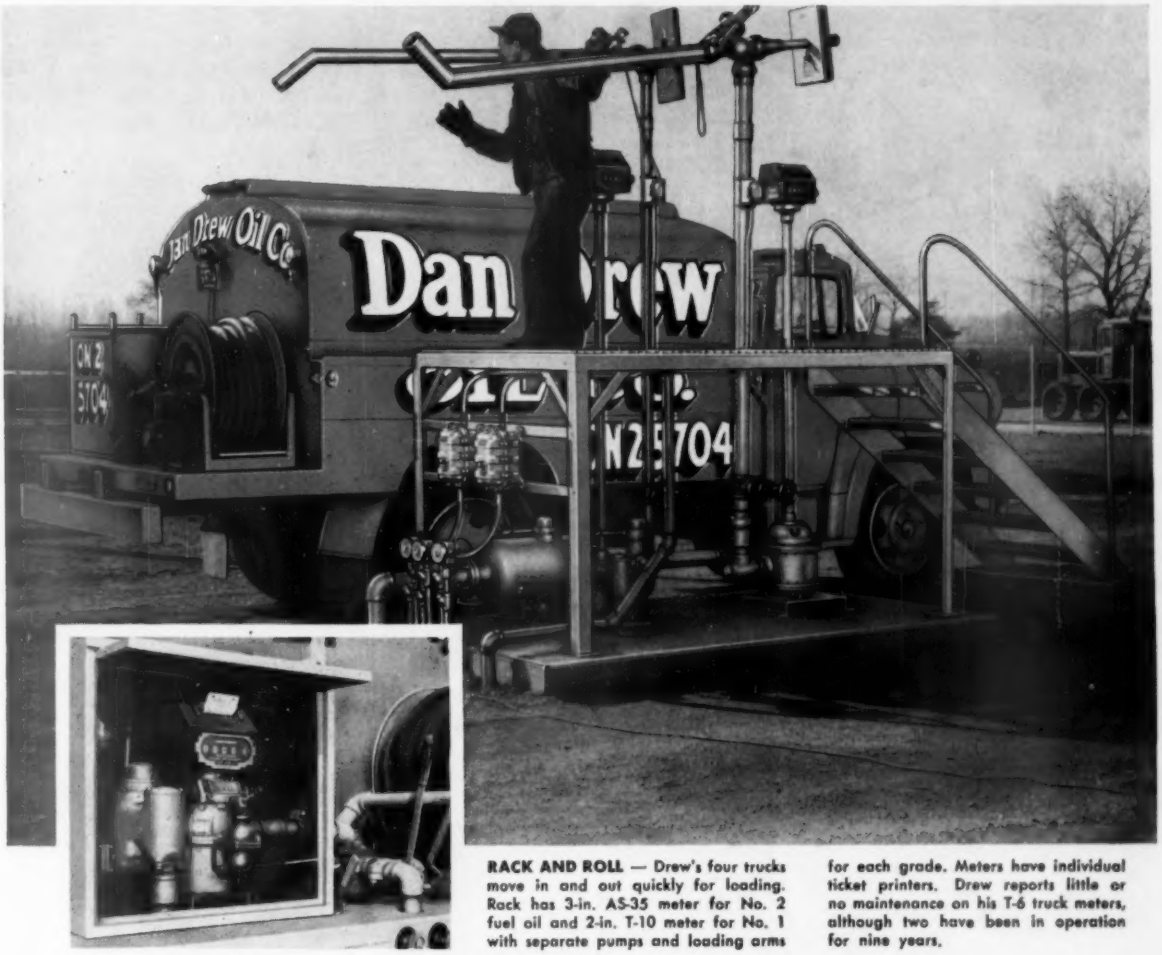
Harlan H. Ragle, petroleum marketing consultant, died of a heart attack on February 25 at the Roosevelt Hospital, New York City. Internment took place on March 2 at Glendale, Calif. As soon as he had finished college, Ragle became associated with a large refining enterprise, which initiated him into the building of marketing outlets, bulk stations and finally, perhaps the first drive-in gasoline service station in the country. He was vice-president in charge of marketing for a large independent marketing company in the midwest where he took part in pioneering work for fuel-oil. For the past 25 years Ragle has specialized as a petroleum marketing consultant with headquarters in New York. During that time he has served many of the principal fueloil distributors in the East.

Donald O. Moore has been named assistant market manager for national accounts, Lennox Industries, Inc., Marshalltown, Ia. His headquarters will be in New York City. He had been midwest division manager for national accounts.

Robert J. Tesar has been named sales manager, Watts Regulator Co., Lawrence, Mass. He has been associated with the sale and merchandising of heating specialties for the past ten years. He had served as manager of the Boston office.

SMITH-ERIE..a measure of this success:

Jobber credits continuing expansion to streamlining of delivery operation— meter systems on rack and truck



RACK AND ROLL — Drew's four trucks move in and out quickly for loading. Rack has 3-in. AS-35 meter for No. 2 fuel oil and 2-in. T-10 meter for No. 1 with separate pumps and loading arms for each grade. Meters have individual ticket printers. Drew reports little or no maintenance on his T-6 truck meters, although two have been in operation for nine years.

Dan Drew Oil Company of Waukegan, Illinois, delivered *125,000* gallons of fuel oil in 1950. Now, only ten years later, this Phillips 66 jobber expects to move *1,700,000* gallons — a tremendous increase that Drew attributes to streamlining of his bulk plant operation.

Drew formerly picked up loads from a central terminal. Lack of meters made it necessary to load and measure trucks by markers — a time-consuming method that depended upon an empty truck tank to get an exact accounting. Now, with his own Smith-Erie metered bulk plant, Drew cuts loading time well over half. Result? More delivery time and an increased customer list.

This success story points out the advantages of Smith-Erie meter systems on *relatively small operations*. Contact your Smith-Erie meter representative for particulars.

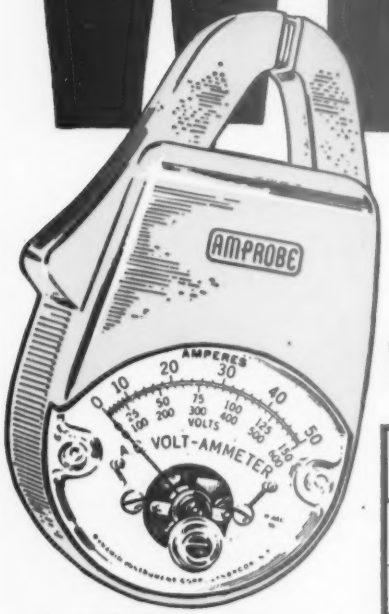
Through research . . . a better way

A.O.Smith
CORPORATION

Smith-Erie Division

Factory: 1602 Wagner Avenue, Erie, Pennsylvania. Offices: Atlanta 5, Georgia; Chicago 3, Illinois; Houston 2, Texas; Los Angeles 17, California; New York 17, New York; Oakland 21, California; Tulsa, Oklahoma. Canada: Toronto 12; Vancouver 1. A. O. Smith INTERNATIONAL S. A., Milwaukee 1, Wisconsin, U. S. A.

WHY settle for an ordinary voltage tester?



Ask yourself these questions	The AMPROBE Junior	ordinary voltage tester
Does it measure current as well as voltage?	YES	NO
Does it give you full visibility on a graduated reading scale?	YES	NO
Does it fit conveniently in your pocket?	YES	YES
Does it measure within ±3% accuracy?	YES	NO
Does it come in a full line of models to meet different problems?	YES	NO
Does it protect you against shorts and shocks?	YES	YES
Does it balance loads, locate grounds, determine motor overloads, check rating of circuit breakers?	YES	NO

The AMPROBE Jr. gives you so much more... not just a run-of-the-mill voltage tester but a precision-made instrument that measures voltage *and* current instantly and accurately without shutting down equipment. All this with one rugged and inexpensive pocket-size tool! And now...FOR THE FIRST TIME...at the request of utilities, industrial plants and other large-scale users of AMPROBES, the AMPROBE Jr. has gone SAFETY YELLOW to conform with standard safety practices.

PICK THE AMPROBE *YOU* NEED! There's an Amprobe for every job, every budget: from 10 amps and 250 volts to 1200 amps and 600 volts AC; from $19.85 to $67.50. And with the Amprobe RS-3, you get a volt-amp-*ohmmeter* all in one pocket-sized, snap-around precision instrument. Every Amprobe comes with test leads; most with top grain cowhide leather case at no extra cost. See the complete Amprobe line at your jobber's today.

Amprobe Jr.®

snap-around volt-amp tester

$19.85

PYRAMID INSTRUMENT CORP., Lynbrook, New York

. . . . Names in the News

C. H. Coughlin has been elected vice president-marketing, American Oil Co., New York. He had been general manager of sales for Amoco since December 1958. He succeeds *T. A. Aldridge* who has been named director of marketing development, Societe Civile Amoco in Paris.

Coughlin

Coughlin joined Standard (Indiana) in 1927 and until joining American served in various sales assignments of increasing responsibility.

Nicholas R. Foloky has been appointed director of engineering, American Tube Products, Inc., West Warwick, R. I. His background includes 30 years in the heating and cooling industries. Before his appointment, he had been with American-Standard.

George Crothers has been named vice president and general manager, General Controls Co. (Canadian), Ltd., headquartered in Guelph, Ont. The new Guelph plant will be opened late in April and will manufacture heating controls and controls for industrial applications.

Robert E. Perritt has joined OPW Corp., Cincinnati, O., as a sales engineer. He will be based in Cincinnati and will handle special field sales assignments.

Oliver Fellows has been appointed district sales manager for Indiana, Ohio and Kentucky by Heil-Quaker Corp., Nashville, Tenn. Before joining the company he had represented the Round Oak Co., Indianapolis Stove Co. and the Jacobs Heater Corp.

W. T. Smiley has been named national service manager for mobile radio, Communications Products Department, General Electric. He will coordinate G-E's authorized service station program under which some 900 service shops provide technical assistance to two-way radio customers.

BEFORE YOU BUY A PUMP

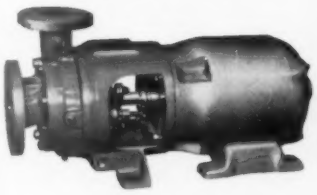
ask yourself these simple questions

1. ***Will I store above or below ground?***
2. ***Will I unload transports and load delivery trucks?***
3. ***What are my head and delivery requirements?***

THEN

Pick the Ingersoll-Rand Centrifugal Pump to suit your needs:

THE MOTORPUMP



The most complete line of close-coupled centrifugal pumps available, ¼ through 75 hp . . . deliveries to 3200 gpm. Designed and built for maximum performance under flooded suction conditions, they operate equally well in any position and require no special mounting or baseplate.

Since better than 80% of all storage facilities are above ground, straight centrifugal pumps or "Vapor-flo" units should be recommended on most installations.

THE "VAPOR-FLO" MOTORPUMP

There's no other pump available with patented features as found in the "Vapor-flo" Motorpump. Under flooded suction conditions subject to vortexing or vaporizing, these self-venting units handle and discharge vapors while continuing to pump. They will not vapor-bind or clog . . . are ideal for transport unloading.

Why pay up to 30% premiums and lose up to 20% efficiency with self-primers when not needed. Ingersoll-Rand "Vapor-flo" Motorpumps are available through 7½ hp for deliveries up to 425 gpm.

OTHER I-R PUMPS FOR THIS SERVICE

Cradle-mounted pumps

Horizontally split, double suction pumps

Self-priming pumps

a century 1860 – 1960 *of pump progress*

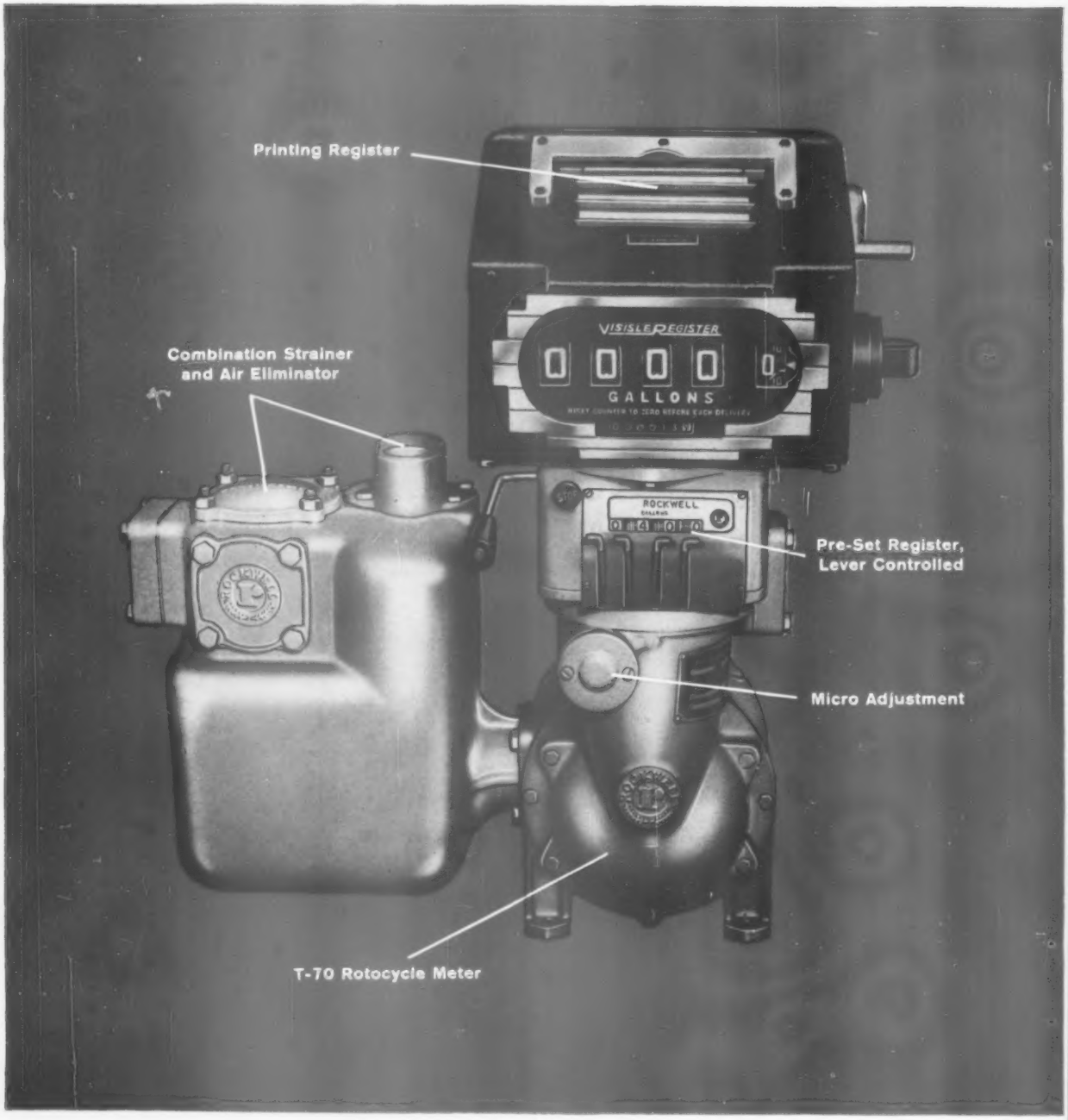
from the leading manufacturer . . .

Ingersoll-Rand

77A9 **11 Broadway, New York 4, N. Y.**

fueloil & oilheat

EVERYTHING YOU



ROCKWELL "T-70" *ROTOCYCLE*

NEED for accurate tank truck measurement

in one easy to install and operate package

With the Rockwell T-70 we've made it easy and economical for you to get all the benefits of tank truck metering; either as new installations or as replacements. Consider these advantages:

EASY to install

You have the option of *three* inlets and *two* outlet connections. You can even make a right or a left hand setting without using adaptors. Thus these meters practically ease themselves into any truck compartment, old or new.

EASY to service

To gain access to the meter rotor, strainer or air eliminator, it is only necessary to loosen a few cap screws. These elements can then be removed through full size areaways for routine cleaning or examination.

EASY to calibrate

A micro adjustment device varies the speed ratio between the measuring element and the register. It takes only a screwdriver to adjust for variations caused by changes in liquid properties (viscosities, etc.) or variables in the meter installation.

EASY to pre-set and operate

You just dial the quantity to be delivered in advance by depressing the levers under each register wheel, then touch the valve control and the meter will "count down" and shut itself off in easy stages as the zero point is reached.

You get all of this plus the precision accuracy of a Rotocycle meter, proved over the years for its reliability under heavy work loads and designed to take the punishment of truck travel in stride. Write for bulletin OG-410. Rockwell Manufacturing Company, Dept. 122D, Pittsburgh 8, Pa. In Canada, Rockwell Manufacturing Company of Canada, Ltd., Box 420, Guelph, Ontario.

TRUCK METERS

another fine product by

ROCKWELL

TANK TRUCK METER

(RATE OF FLOW 14-70 GPM)

fuel oil & oilheat

NEW HIGHLANDER

automatic boiler-burner plant

for the first time—a unit made by and for "burner men"

The burner industry has been waiting for an oil burner man's boiler. Industrial Combustion, Inc., puts the burner *before* the boiler with its new Highlander. This completely assembled boiler-burner plant (Scotch-type two-pass unit) has been designed and constructed from the burner specialist's point of view — built to bring out the best efficiency and reliable operation of the burner.

And "burner men" design is just the beginning! The new Highlander will be sold exclusively by authorized Industrial Combustion dealers. It will be installed and serviced by these qualified burner technicians.

Write today for complete information — Dept. FO-4.

HEART OF THE HIGHLANDER is the famous Industrial Combustion burner. Shown is the HEV-E-OIL burner especially engineered to make use of inexpensive heavy oils — number 4 and 5. Number 6 or Bunker C in larger models. Available from 5 to 150 gph.

INDUSTRIAL COMBUSTION INC.

EXECUTIVE OFFICES: 4507 N. OAKLAND AVE., MILWAUKEE 11, WIS.

Proved recoverable oil Reserves reported at all-time High for '59

THE U. S. OIL INDUSTRY brought the nation's proved recoverable reserves of crude oil, natural gas liquids and natural gas to an all-time high in 1959, according to annual reports issued today by the American Petroleum Institute and the American Gas Association.

Increases were also noted in the production of these supplies of liquid hydrocarbons and natural gas, a sharp reversal from the previous year when production was down.

Proved reserves of oil and natural gas are those which experience indicates can be recovered by production methods now in operation. They do not include oil in unproved portions of partly developed fields, or in stratas favorable to the accumulation of oil, but as yet untested.

Highlights of the 1959 report, covering the calendar year ended December 31 and representing estimates of the reserves committees of the two trade associations, are as follows:

CRUDE OIL: 31 billion 719 million barrels, up 1 billion 183 million over 1958;

NATURAL GAS LIQUIDS: 6 billion 522 million barrels, an increase of 318 million over the previous year;

TOTAL LIQUID HYDROCARBONS (crude oil and natural gas liquids):

ESTIMATED PROVED RESERVES OF LIQUID HYDROCARBONS
(Thousands of Barrels of 42 U. S. Gallons)

	Proved Reserves as of Dec. 31, 1958 (1)	*Changes in Proved Reserves Due to Extensions (New Oil) and Revisions During 1959* (2)	*Proved Reserves Discovered in New Fields and in New Pools in Old Fields in 1959* [1] (3)	[2] *Production During 1959* (4)	*Proved Reserves as of Dec. 31, 1959 (Columns 1+2+3 less Column 4)* (5)
Alabama [3]	38,586	1,271	..	5,609	34,248
Arkansas	352,015	18,942	1,376	27,405	344,928
California [4]	4,168,749	246,727	8,615	336,266	4,087,825
Colorado	413,328	39,647	2,708	49,817	405,866
Illinois	618,539	60,967	3,789	78,134	605,161
Indiana	71,588	12,702	1,279	11,494	74,075
Kansas	1,121,986	100,128	17,712	125,411	1,114,415
Kentucky	163,829	44,577	8,744	31,536	185,614
Louisiana [4]	5,239,948	1,003,553	166,194	391,809	6,017,886
Michigan	46,470	16,878	4,240	10,691	56,897
Mississippi	433,870	31,358	15,057	50,004	430,281
Montana	345,296	5,203	3,300	31,020	322,779
Nebraska	74,941	28,842	5,700	23,493	85,990
New Mexico	1,311,359	238,104	20,795	121,429	1,448,829
New York [3]	35,803	360	..	1,966	34,197
North Dakota	345,318	148,706	5,100	19,287	479,837
Ohio	72,427	9,006	..	5,992	75,441
Oklahoma	2,255,635	178,499	19,949	221,765	2,232,318
Pennsylvania	123,517	(—) 60	20	6,226	117,251
Texas [4]	17,714,183	1,531,171	187,009	1,142,314	18,290,049
Utah	213,538	53,603	207	40,433	226,915
West Virginia	115,390	(—)26,865	2,171	5,271	85,425
Wyoming	1,459,593	142,080	4,786	130,242	1,476,217
Miscellaneous [5]	4,027	5,889	150	855	9,211
TOTAL U. S.	36,739,935	3,891,288	478,901	2,868,469	38,241,655

[1] Only a limited area is assigned to each new discovery, even though the committee may believe that eventually a much larger area will produce; for, in this report, the concern is only with actually proved reserves.

[2] Compiled from records of actual production for whatever period such were available, with estimates for the remainder of the year. Any variance will be changed in next year's report.

[3] Crude Oil only.

[4] Includes off-shore reserves.

[5] Includes Alabama natural gas liquids; Alaska, Arizona, Nevada, South Dakota, Tennessee, Virginia and Washington crude; Florida and Missouri crude and natural gas liquids.

EVER-TITE

210

your best buy

for high pressure deliveries

Dash-pot feature assures better control under extreme pressures—less shock after delivery

•

Seals of dual poppets are gasoline and oil resistant

•

Vacuum breaker feature available

•

Aluminum body, bronze parts

•

Rigid or flexible tubes

•

All parts are completely interchangeable with parts of other "210" nozzles on the market

•

Order now from your Ever-Tite distributor, or write for details

EVER-TITE COUPLING CO. INC.
254 West 54th Street
New York 19, N. Y.

designed to complement

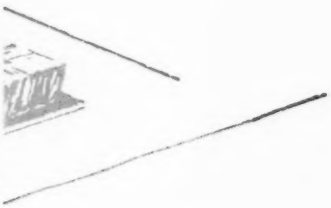
the décor of every home . . .

GENERAL ELECTRIC'S NEWEST STRAIGHT-LINE THERMOSTAT

Here's a brand-new straight-line thermostat from General Electric. Its clean good looks and modern appearance match its proved, engineered accuracy. And what does this mean to you and your customers?

It means solid comfort conditioning. This new, precision-engineered instrument provides accurate control for today's heating systems . . . at the touch of a fingertip. Just a touch on the smart adjusting dial sets the temperature that means desired heating comfort.

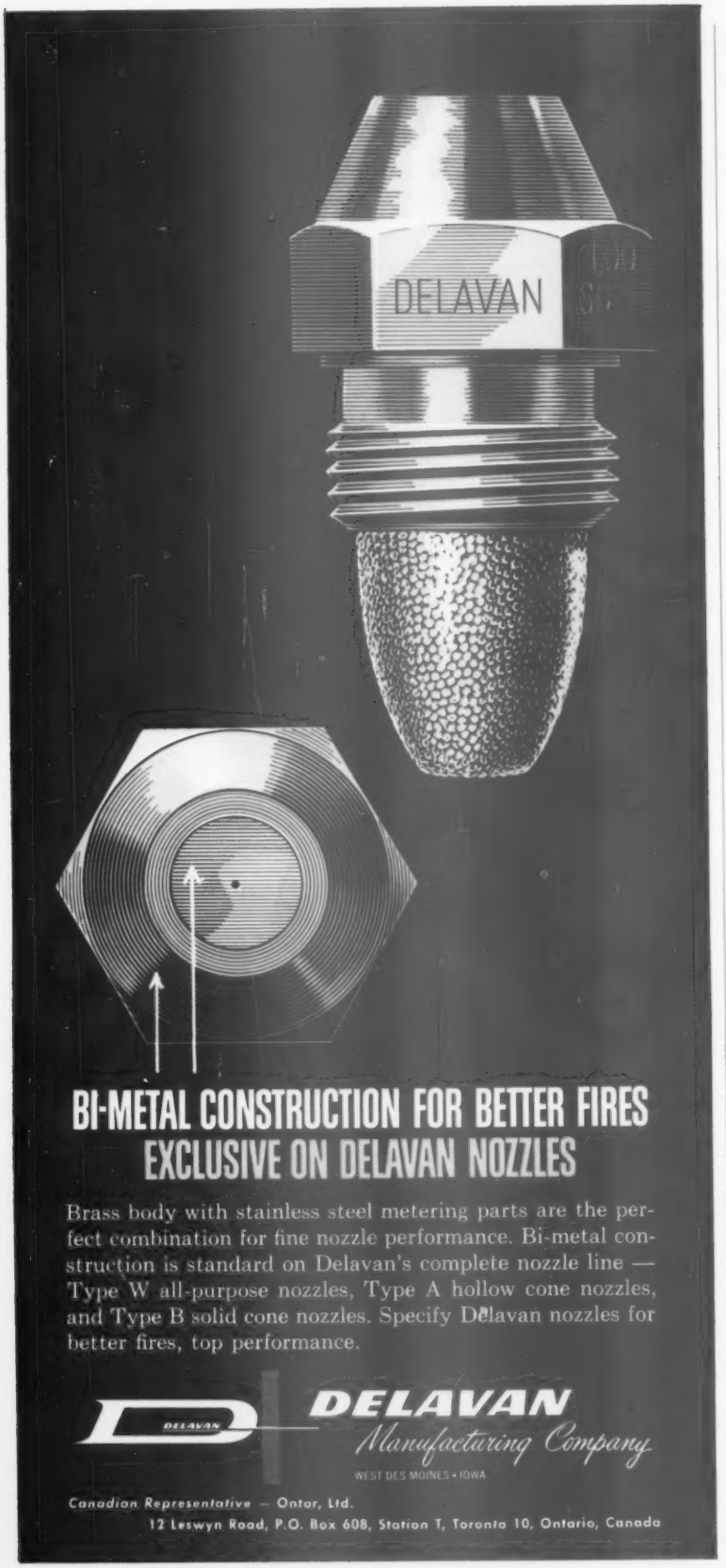
It means sure, positive control. Because of its positive, snap-action mechanism, the new G-E thermostat provides maximum resistance to household vibrations; and it needs no leveling. And, of course, it's easy to install. Its sub-base goes on the wall with only two screws; and only two wire connections are needed.



For more information:
OEM's: contact your nearby G-E Apparatus Sales Office for application engineering service.
Dealers: contact your local distributor of G-E heating controls.
Or write to Section 740-142, General Electric, Schenectady 5, N. Y.

APPLIANCE CONTROL DEPARTMENT

GENERAL ELECTRIC



BI-METAL CONSTRUCTION FOR BETTER FIRES
EXCLUSIVE ON DELAVAN NOZZLES

Brass body with stainless steel metering parts are the perfect combination for fine nozzle performance. Bi-metal construction is standard on Delavan's complete nozzle line — Type W all-purpose nozzles, Type A hollow cone nozzles, and Type B solid cone nozzles. Specify Delavan nozzles for better fires, top performance.

DELAVAN
Manufacturing Company
WEST DES MOINES • IOWA

Canadian Representative — Ontar, Ltd.
12 Leswyn Road, P.O. Box 608, Station T, Toronto 10, Ontario, Canada

38 billion 241 million barrels, up 1 billion 501 million over 1958;

NATURAL GAS: 262 trillion 597 billion cubic feet, an increase of 8 trillion 455 billion over 1958.

The reserves committees estimated production of crude oil at 2 billion 483 million barrels, up 110 million over 1958; natural gas liquids at 385 million barrels, an increase of 44 million over 1958; and total liquid hydrocarbons, 2 billion 868 million barrels, up 154 million over the previous year.

Natural gas production rose 956 billion cubic feet to 12 trillion 441 billion cubic feet.

As in other years, a large percentage of the increase in total liquid hydrocarbon reserves came from extensions and revisions of previous estimates covering pools and fields discovered prior to 1959. This results from the fact that no field of any consequence is ever fully developed during the year in which it is first discovered.

For this reason, new discoveries during a given year are as a rule very small in comparison with the reserves later developed in the same fields through further drilling effort and increased knowledge of reservoir characteristics.

OHI Insurance extended to increase life Coverage

THE OIL HEAT INSTITUTE of America's Distribution Division Insurance Trust will make available a new supplemental "A" insurance plan which will increase the amount of life insurance coverage available to those up to the age of 65 who are now participating in the Basic and Supplemental Life Insurance Plans.

Under the existing insurance plan, owners, officers and partners earning over a certain sum, can carry up to $15,000 worth of life insurance, while supervisory personnel and those in lower salary brackets can carry up to $10,000 life coverage.

With the inception of this new supplemental plan "A," coverage for owners, partners and officers of companies, earning $10,000 or more per year, can be increased to $35,000. This is $20,000 more than the existing coverage. For supervisory person-

YES FOR HESS RIGHT DOWN THE LINE!

	HESS Platinumized WHITE-HEAT	Brand "A"	Brand "B"	Brand "C"	Brand "D"
Additive-free #2 fuel oil	YES	NO	YES	NO	NO
Uncracked, straight-run oil	YES	NO	NO	NO	NO
Delivered in company-owned, metered trucks	YES	NO	NO	NO	NO
Guaranteed delivery, 24 hours every day	YES	NO	NO	YES	NO
Independent supplier	YES	NO	NO	NO	NO
From refinery devoted primarily to #2 oil production	YES	NO	NO	NO	NO
"Rack" service 24 hours every day	YES	NO	YES	NO	YES
Promotes dealers independent business	YES	YES	NO	NO	NO

See for yourself. Hess gives you more. Much more than any major or "affiliated independent"!

More quality... more service... more supply!

Only Hess offers purer, cleaner, clearer PLATINUMIZED WHITE-HEAT.

Call your Hess sales representative today. Learn how you can increase *your* business... put money in *your* pocket with WHITE-HEAT.

Hess, Inc., State St., Perth Amboy, N. J. • VAlley 6-1000

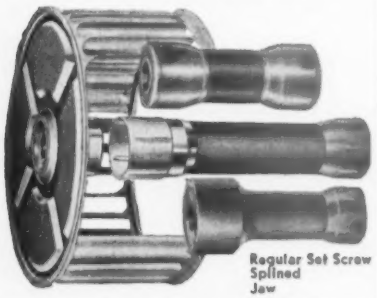
TERMINALS: PERTH AMBOY, N. J.* • EDGEWATER, N. J. • PORT READING, N. J.* • PENNSAUKEN, N. J.* • WOODBRIDGE, N. J.* • NEW HAVEN, CONN. • ALSEN, N. Y. • RENSSELAER, N. Y.* • ROCHESTER, N. Y. • SCRANTON, PA.* • BALTIMORE, MD.* • HESS FUEL OILS, INC.: JACKSONVILLE, FLA. • PORT EVERGLADES, FLA. • HESS TERMINAL CORP.: HOUSTON, TEX. • NEW ORLEANS, LA. *WHITE-HEAT Terminals

QUALITY is our business .. without *any* compromise

AND ONLY Guardian

GIVES YOU ALL THREE—

1. FLEXIBLE COUPLINGS



Regular Set Screw Splined Jaw

Only Guardian gives you these features—

- **ROLL SPINNING**—Exclusive process joins all three components at one time—while in final operating alignment.
- **BRAIDED RUBBER**—Ground to absolute true concentricity. Furnished in BUNA-N TUBE and NEOPRENE COVER. Lateral and angular alignment requirements fully met.
- **ONE-PIECE DESIGN**—Minimizes assembly and handling costs. Made to exact lengths required.

Over 5,000,000 Guardian couplings are on original equipment. This is your assurance of highest quality and universal acceptance in the field.

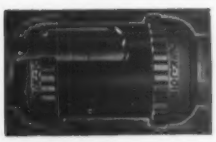
2. OIL TANK VALVES

No. 1910 B

Check These Superior Guardian Features—

- Metal-to-metal seating.
- Highest quality machined bar stock.
- Greater wall and body strength.
- Fusible linkage available in all designs.
- Valve designs for every type of installation.

3. QUIK JOINT



Steel compression fittings for connecting steel pipe.

Patent No. 2,685,460

- Eliminates threading of pipe.
- Decreases cathodic corrosion and electrolysis.
- Guaranteed for pressure up to 2060 P.S.I.
- Allows 7° angular deflection
- U.L. approved for oil and gas.

Write for free descriptive literature.

Guardian PRODUCTS CORP.
COUPLING DIVISION

Dept. F-40 1215 East Second Street
MICHIGAN CITY, INDIANA

nel earning under $10,000, maximum coverage will be $20,000, double that of the existing Basic and Supplemental Plans.

The OHI Insurance Trust now offers coverage in Basic and Supplemental Life Plans; Medical-Hospital-Surgical Insurance; Major Medical Coverage; Accidental Death and Dismemberment; Accident and Sickness; Budget Plan Life Insurance; as well as Company Pension Plans.

Pacific OHI Convention set for Reno, May 4-6

THE CONVENTION of the Pacific Northwest Oil Heat Institute Chapters, embracing those in Oregon, Washington, Idaho and Nevada, takes place May 4, 5 and 6 at Reno, Nev.

At the same time the Pacific Northwest Regional Advisory Committee will meet to map plans for the oil-heating promotion campaigns the Committee supervises. These are based upon participation of both major oil companies and their fueloil retail outlets.

The official convention program includes two morning sessions and a luncheon, with time left open for a golf tournament.

The tentative schedule follows:

Wednesday, May 4

A.M. Regional Advisory Committee Meeting.

Convention meeting golf tournament, with perpetual prize and other prizes all day at Hidden Valley Golf Club.

Thursday, May 5

10:00 A.M. Greetings from the Governor.

Scott Partridge, H. J. Sandberg Co., Portland, Ore.,
"The Role of equipment Sales in our Future, the dealer Viewpoint"

Hal Hutchinson, Richfield Oil Co., Los Angeles,
"The Supplier benefits from equipment Sales"

Jim Gilleland, Gilleland Oil Co., Bellevue, Wash.
"Is Service essential to our Future?"

Supplier representative,
"Do We understand the Need for Service?"

Charles H. Burkhardt, Oil-Heat Institute of America,
"How to sell Equipment Service for a Future"

Supplier representative,
"Selling Merchandise"

Evening—Evening social and banquet at Harrah's Club, Lake Takoe.

Friday, May 6

10:00 A.M. Panel moderator, Bob Gray, FUELOIL & OIL HEAT

Standard of California speaker,
"The fuel Cell and other new Developments"

Speaker to be announced,
"The inevitable Increase in gas and electric rate Costs"

Bob Gray
"We manage our Costs in the Future"

Frederick E. Baker, Frederick E. Baker & Associates, Seattle,
"Applying the Yardstick of human Relations and business Judgment to a successful Future"

Question and Answer Period

1:00 P.M. Luncheon, with Selwyn Eddy, keynote speaker,
"The Future of heating Oils Today and in 1970"

Evening—Open House cocktail Parties of Manufacturers and Suppliers.

A special program for the ladies includes a tour to Virginia City and Carson City on Thursday, May 5.

Bert Caton, Reno, Press Brick Co., is chairman of the Registration Committee and Advertising and Publicity Committee;

Bob Sullivan, Reno Chamber of Commerce, is assisting on registration and is heading the Housing Committee;

George Basta is chairman, Entertainment Committee and speaker Assignments;

Jack Lyon, Signal Oil Co., is chairman of the Program and Head Table Committee;

Vic Miller, Washoe Wood & Fuel Co., Reno, heads the Transportation Committee;

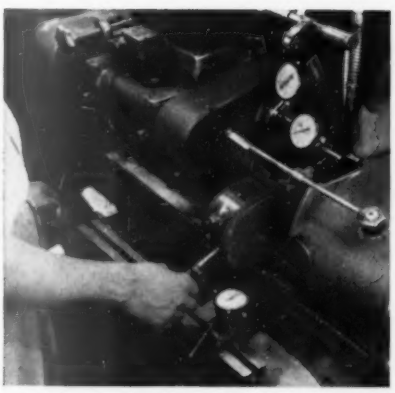
Bob Woody, Standard Oil Co., is chairman of the Golf Committee;

Harriet Basta is chairman of the Ladies Committee.

MORE THAN 30 TIMES

the 100,000 people watching this game is the number of B&G BOOSTERS now in dependable operation

United Press Photo



B&G Boosters are precision-manufactured throughout. Here extremely accurate grinders maintain Booster shaft dimensions within .0005 inch limits.

Over 3,000,000 Boosters are in service today...clinching evidence that their superior quality and performance has never been challenged.

The reasons why B&G Boosters so completely dominate the heating market are not hard to find. Above all they are *quiet—vibrationless*...the prime essential of a forced hot water circulating pump. They are dependable and *profitable* —not a cause of endless service calls and dissatisfied customers. Sound design and sturdy construction of best materials assures faithful performance for years.

B&G Boosters are produced by a manufacturer who stands back of his product—who offers help in any problem of design or installation—and whose nation-wide distributors maintain adequate stocks to serve your needs.

BELL & GOSSETT
COMPANY
Dept. GD-7, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

fueloil & oilheat

"WILL CALLS" CAN BE CONVERTED TO AUTOMATIC DELIVERY

New low cost Fuel Use Computer proved to be great salesman by enterprising oil dealer

This new low cost Fuel Use Computer . . . which helps you estimate fuel use at a glance . . . has been successfully used by an enterprising dealer as a means for converting die hard "will call" customers to automatic delivery. He'd found the major reason for their refusal to convert to be fear that their needs would not be adequately anticipated . . . that they'd run short of fuel during a cold spell. He eliminated this fear by explaining how the Fuel Use Computer enabled him to estimate their reserve exactly . . . built their confidence . . . and converted most of his list to automatic delivery. Result: maximum profit out of the use of his trucks through scheduled trips.

You can convert *your* "will calls", too . . . and we'll help you do it. For detailed information, just fill out the attached coupon and return it to us *today*.

How The Fuel Use Computer Works

A rugged measuring unit . . . easily attached to your roof . . . continuously relays the weather to a compact computer on your desk. This computer converts the information into average fuel use at any time . . . and gives you the information on four direct reading registers. It indicates fuel oil use both for customers who combine house and hot water heating and those who heat house only. It's safe, entails far less clerical work, eliminates degree day calculating, and allows use of your present card system. And it can be used to convert "will calls" to automatic deliveries. Fill out the coupon *now*.

2188

HRB **HRB-SINGER, INC.**

A SUBSIDIARY OF THE SINGER MANUFACTURING COMPANY

90 Schureman Street, New Brunswick, N. J.

FO-4

HRB-SINGER, INC.

90 Schureman St., New Brunswick, N. J.

Please send detailed information on how to promote the Fuel Use Computer to convert "will calls" to automatic delivery.

Name_____

Company_____

Street_____

City_____

State_____

API Publication covers the Art, Science of Oilburning

API PUBLICATION No. 1537, "Literature pertaining to the Art and Science of Oilburning for residential Applications," is intended as a guide to research investigators and equipment developers of oilfired equipment, particularly for distillate fuels.

The report was compiled by C. F. Speich and D. W. Locklin, Battelle Memorial Institute, Columbus, Ohio. Locklin also is research consultant to the API Fueloil Committee.

There are 16 sections contained in the booklet, comprising broad subject classifications, each prefaced by an introductory review of the subject and each containing brief abstracts of pertinent references. Primary emphasis has been placed on selecting references pertaining to combustion in relatively low-capacity distillate oilburners, but much of the information also applies to heavier fueloils and higher-capacity burners, including commercial and industrial sizes.

The 16 main headings covered are: General information sources; atomization; ignition; physics of combustion; chemistry of combustion; fuel-air mixing and recirculation; flammability and stability limits; catalytic and surface combustion; combustion and equipment noise; fueloil characteristics; chimneys, vents and combustion air supply; laboratory and field performance studies; combustion research techniques; fueloil applications and equipment developments; incinerators; codes and standards.

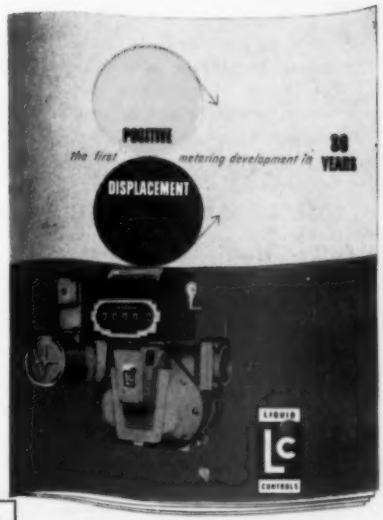
Persons interested in obtaining copies of the review should communicate with the Fueloil Committee, American Petroleum Institute, Division of Marketing, 1271 Avenue of the Americas, New York 20, N. Y.

❖

Robert Wenke has been promoted to regional manager-distributor sales, Mueller Climatrol, Milwaukee, Wis. *Donald W. Irwin* has been appointed a sales representative in the Michigan area. He had been regional sales manager in Michigan for Briggs Manufacturing Co.

New **6-STEP** Positive Displacement Meter features low pressure loss, high accuracy.

Liquids flow smoothly through an LC Meter—they're never squeezed, never expanded. Pressure loss is minimized. Accuracy and meter life hit new highs. The reasons? LC's simple, true-rotary movement has no reciprocating or oscillating parts, no metal-to-metal contact in the measuring chamber, no axial thrust and no heavy bearing loads (induced by compressing trapped liquid, or by drawing a vacuum at any phase of the cycle). This higher hydraulic efficiency permits installation savings in sizing lines, pumps and motors. It also permits installation and operation of LC meters in series or in tandem without affecting calibration.



FROM STOCK—100 gpm, 350 gpm, and 600 gpm sizes!

LIQUID CONTROLS CORPORATION

Commonwealth Avenue, North Chicago, Illinois

LC Meters . . . engineered for precision measuring of petroleum and commercial liquids

LIQUID LC CONTROLS

SEND FOR NEW FOLDER giving full facts on why the LC Meter insures greatly increased accuracy . . . see why it pays to "buy LC." Write today.

1st

FOR FASTER FILLING

PHILLY
RAPID-TITE
Fuel Oil Delivery System

. . . you can reduce delivery costs as much as 20%. We'll prove it to you with your equipment at your office. Ask our field service man or send coupon below.

PHILLY'S first for modern fuel oil delivery

- **One Nozzle Connector fits all fills.**
- **One-quarter turn hook-up.**
- **One Cap and Insert for all fills.**
- **One "O" ring Seal for Cap and Connector.**

PHILLY *RAPID-TITE* DIVISION
PLASTIC AND APPLIANCE CO., INC.
5311 WESTMINSTER AVE., PHILA. 31, PA.

MAIL TODAY

I'd like proof.

Name

CO.

Street

City State

Year-round, oilfired Airconditioner offered to fueloil Dealers by Arkla

A SALES OPPORTUNITY for fueloil marketers is offered by Arkla Air Conditioning Corp., Little Rock, Ark., with the announcement of the Arkla-Servel Sun Valley all-year oilfired airconditioner.

Arkla presented its oil airconditioning marketing program at the annual convention, Oil-Heat Institute of America in New York on April 7 and displayed the unit at the 23d National Oil Heat and Air Conditioning Exposition.

"Selling fueloil for summer cooling," said William G. Wepfer, general sales manager, "offers the oil marketer an unsurpassed avenue for profits and a solution to many of his perplexing problems."

For example, he went on, sales can be made by a dealer's present personnel. Fueloil deliveries for cooling operation come during the slack summer season. Thus, no new personnel or equipment is required.

Next, free service on the Sun Valley oil airconditioner can be incorporated into year-round fuel contracts to strengthen customer loyalty.

The Sun Valley oil unit is essentially an oilfired version of Arkla's present absorption-type gas airconditioner. The main difference is that an oilburner has been substituted in the unit's generator, where a refrigerant solution (water-lithium bromide) is boiled to produce both the cooling and heating cycles. The Sun Valley is a year-round airconditioning package, providing both cooling and heating from one single-coil, direct-fired, vacuum-sealed absorption system.

"The Sun Valley oil airconditioner," Wepfer said, "operates on the heat absorption principle, containing no moving parts in its heating and cooling cycles. This permits it to maintain a constant efficiency and capacity even in such extreme temperature ranges as minus 20 degrees to 120 degrees above zero. The Arkla-Servel thus is the only year-round 'heat pump' that can operate at nearly all temperatures without requiring supplemental heat or energy."

Arkla, a subsidiary of Arkansas Louisiana Gas Co. of Shreveport, La., and Little Rock, acquired the airconditioning division of Servel, Inc., in September, 1957.

Initially, the Sun Valley oil-fired unit is being made available in two basic sizes, the Model 500-FO 3½-ton and the Model 750-FO 5-ton. The Model 500-FO has a delivered capacity of 42,000 Btuh on cooling with a full-capacity input of .57 gallons per hour of No. 2 fueloil. On heating, bonnet capacity is 96,000 Btuh with an input of .86 gph. The Model 750-FO has the same input on cooling and heating as the Model 500-FO does on heating, boosting its cooling capacity to 60,000 Btuh.

For oil marketers and dealers interested in an oil airconditioning program, Arkla offers service and product training. One-week schools are conducted continuously both at the company's Evansville, Ind., plant and Little Rock sales headquarters. Field training schools also are held, and can be arranged through oil associations and marketing groups whenever 10 or more students can be assembled. Complete training and instruction manuals also are published by Arkla, Wepfer added.

Inquiries should be directed to Arkla Air Conditioning Corp., 812 Main Street, Little Rock, Arkansas.

HOW BIG?

HOW LIGHT?

HOW HEAVY?

HOW SMALL?

What you should know about diesel horsepower today!

HOW SMOKY?

A non-technical discussion of diesel engine horsepower for the truck operator... and some sound advice on diesel engine design.

As legal load limits and performance requirements increase, truck operators face a welter of horsepower claims—claims that promise increased load-moving ability at lower cost . . . but claims unsupported by years of proved performance.

Remember, however, that higher horsepower can be costly! It can involve increased weight and bulk, which increase BBC dimensions unless accessibility, driver comfort or maintenance costs are sacrificed. Other penalties include smoke limits above acceptable standards, questionable in light of smoke-abatement programs and engine efficiency . . . higher fuel consumption, a penalty that defeats one of the basic advantages of diesel operation...or shortened engine life.

Obviously you can't have everything. But you can strike a satisfactory balance. You can operate a diesel engine that provides top horsepower output *without* sacrificing performance or economy. You can—if you know what to avoid and what to look for. Ask yourself these important questions:

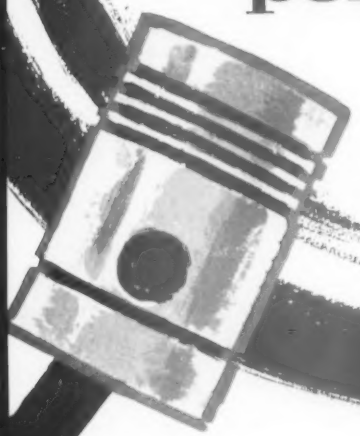
Q: Will a larger-size, heavier engine of greater piston displacement produce greater horsepower?

A: Generally it will—but at the penalty of less payload and cubage. Naturally when piston displacement is increased by the use of larger and heavier engine blocks, it is possible to secure higher horsepower.

But truck manufacturers today have spent, and are continuing to spend, hundreds of thousands of dollars to reduce size and weight. They're shrinking bumper to back of cab dimensions to permit you to haul greater cubage trailers, and they're reducing tractor weight so that you can haul more payload within permissible weight limits. Of course, you cannot have the increased horsepower of a larger displacement engine without bulk which, in the case of conventional units, decreases accessibility.

Q: Since larger displacement may not be the answer to increased horsepower, how about the smaller, lighter diesels utilizing the two-stroke principle?

Only the Mack Thermodyne® diesel sets the standard with full-measure performance



The high-performance diesel engine that meets the qualifications outlined on the preceding pages is not theoretical . . . it is in constant daily use in every type of hauling operation the world over. It is the world-famous Mack Thermodyne diesel Model END 673.

Proved in years of actual service, the Mack Thermodyne meets all the requirements that comprise the most efficient diesel engine. Its engineering and construction features have been pioneered by Mack and have proved themselves in service, setting the standards by which competitive engines are evaluated.

Listed here are the engineering principles that dictate how the most efficient diesel engine is designed and built . . . by Mack.

The Mack Thermodyne diesel is moderate in both size and weight. Its displacement of 672 cu. in. is great enough to provide high horsepower output without sacrificing chassis weight . . . without increasing bumper to back of cab dimensions . . . and without sacrificing accessibility.

The Mack Thermodyne diesel operates at moderate piston speeds. Its 1500 to 2100-rpm operating range means the Thermodyne has a wider range than some competitive engines, eliminating the need for excessive gearing and minimizing dangerous low-speed lugging.

The Mack Thermodyne diesel operates with the lowest exhaust smoke density, thanks to Mack's Air-Swirl combustion system which provides the highest thermal and volumetric efficiency of any present-day engine. Where other engine makers inject more fuel to increase horsepower, thus producing excessive smoke, Mack extracts more horsepower from less fuel.

The Mack Thermodyne diesel uses only one exhaust and one intake valve per cylinder, which maintain high volumetric efficiency because exclusive Mack Durafaced valve lifters permit larger, higher-lift valves to be used, operating at higher rates of acceleration. No complex, expensive-to-maintain multiple valving is needed.

The Mack Thermodyne diesel, rated at a conservative 170 hp using standard SAE diesel correction factors, with all accessories operating, delivers only slightly less than its rated horsepower to the flywheel. Its net horsepower of 160 is attained at remarkably low fuel consumption—.36 lb. per bhp/hr. at 1500 rpm to only .395 lb. per bhp/hr. at 2100 rpm—unmatched economy throughout its wide usable operating range.

The Mack Thermodyne diesel loses minimum horsepower to accessories and to exhaust heat, thanks to its high thermal efficiency. No complicated and expensive modulating fans are needed. Horsepower loss to the fan, for example, is only 3½, while fans of some competitive engines draw over twice as much. Exhaust temperature of the Mack diesel at wide open throttle is only 1150 deg. F., as against exhaust temperatures of competitive engines that run as high as 1300 deg. F.

The Mack Thermodyne diesel requires minimum maintenance because it is designed in accordance with accepted engineering standards that have been thoroughly proved. Its four-stroke design means lower average piston and head temperatures and less strain on moving parts.

Mack Turbocharged Thermodyne diesel for higher horsepower output

For those applications requiring greater output than the 170 horsepower of the naturally-aspirated Model END 673 without excessive size and weight, Mack offers the 205-hp Turbocharged Thermodyne diesel. The Turbocharged Model ENDT 673 offers truck operators the true horsepower of its companion engine, but in a higher range . . . the same rugged construction.

Its turbocharger, being driven by exhaust gases alone and not by gearing, drains off far less accessory horsepower than gear-driven superchargers.

Mack's four-inch turbocharger is oil cooled by engine lubricating oil, and turbine and blower are in a compact unit adding little to engine weight.

Engine lubricating oil is water cooled and is thoroughly cleaned every cycle by full-flow filtration to prolong engine and oil life.

For increased performance and unexcelled fuel mileage, as well as a long, trouble-free operating life, the Mack Turbocharged Thermodyne diesel is the logical choice of truck owners requiring a higher-powered engine without excessive bulk.

PROVED the most economical diesel over many years of operation in the vehicle

The true measure of a diesel engine is proved by operation in the vehicle in hundreds of thousands of miles. Laboratory testing is not enough!

Only the Mack Thermodyne gives you the proof . . . only the Mack Thermodyne diesel is:

• Proved by fuel and upkeep figures—many of them published—of leading truckers using Mack diesels.

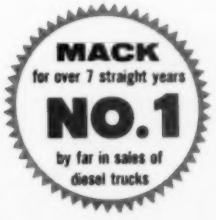
• Proved by operators who have made it the most popular automotive diesel engine ever produced in this country.

• Proved by the fact that today there are twice as many Mack diesel-powered trucks in operation as any other make . . . more than the next two makes put together.

This proof of leadership in the diesel engine field is the reason the Mack Thermodyne diesel is the one diesel engine that sets the standards of performance and operation life by which all other truck diesels are judged . . . the key reason, too, Mack leads in diesel truck sales—No. 1 in diesel truck sales for seven straight years.

MACK FIRST NAME FOR **TRUCKS**

Mack Trucks, Inc., Plainfield, New Jersey • Mack Trucks of Canada, Ltd., Toronto, Ontario



One of a series of frank discussions about highway transportation.

Printed in U.S.A.

7642

A: Certainly, two-stroke diesels can produce more horsepower per cubic inch displacement than those of the four-stroke type and, therefore, the engine of comparable horsepower can be lighter and smaller. However, because the reciprocating parts are subjected to twice the workload of those in a four-stroke engine, engine life must obviously be reduced and maintenance costs increased.

Q: Well then, out of a given displacement engine is it possible for a manufacturer to obtain more horsepower?

A: Certainly, by increasing the amount of fuel injected on each power stroke—but then you pay the double penalty of increasing fuel consumption and heavy exhaust smoke.

Q: Isn't there an optimum engine size that overcomes the problems of both bulky and small engines?

A: Very definitely. The balance is an engine of moderate size and weight which has been engineered to handle specific gross weights without sacrificing low maintenance costs and long life, producing ample usable horsepower with low specific fuel consumption and acceptable exhaust smoke.

Q: Can every engine manufacturer provide high horsepower from such an optimum engine?

A: No, for very definite reasons. Before it can produce maximum horsepower for moderate displacement, an engine must possess a high degree of thermal efficiency—which means it must extract from every ounce of fuel as much of the latent heat as possible.

Q: How can high thermal efficiency be achieved?

A: Through high volumetric efficiency, or breathing capacity, and a combustion system which converts into power the maximum amount of latent energy in the fuel. To increase volumetric efficiency, some manufacturers use two intake and up to four exhaust valves, complicating the valve system and making it difficult and expensive to maintain.

Q: After taking the items of size and weight into consideration, do I choose an engine on the basis of its rated horsepower?

A: Definitely not. Rated horsepower is by no means indicative of the actual power the engine will produce at the flywheel in a chassis. Neither will it be indicative of its fuel consumption.

Q: What then is rated horsepower?

A: Rated horsepower is the horsepower produced by an engine on a dynamometer in the manufacturer's laboratory. It is tested without such engine accessories as generator and air compressor, with no fan and with only the water pump operating. Then, so that rated horsepowers may be on a comparable basis, the power output is corrected to standards established by the Society of Automotive Engineers.

Q: Do all manufacturers use the same correction factors?

A: No. To secure a higher rating for promotional purposes, some manufacturers use correction factors that show more favorable output ratings.

Q: If rated horsepower does not indicate an engine's true performance, what is a more realistic indication of its output?

A: Net horsepower, or, to use a better term, *usable* horsepower. But it should be pointed out that even net horsepower, which is the horsepower of an engine minus the parasitic horsepower consumed by all of the accessories, does not indicate the true horsepower of the engine at the flywheel when operating in a chassis. The reason: correction factors are idealistic and can seldom be attained in a chassis. The air intake when it enters the combustion chamber is usually hotter than the 60 or 90° temperature used by manufacturers to plot their power curves. The hotter the air, the thinner it is, and the breathing capacity is reduced. In addition, no truck runs at sea level all of the time, and altitude also reduces the breathing capacity of the engine because air is thinner.

Q: How then can one judge the horsepower an engine will actually produce in a chassis?

A: By putting it on a chassis dynamometer, although this isn't always practical. However, it is possible to get a fairly good impression of the efficiency of an engine by observing the diameter of the fan, the pitch of the blades, the size of the radiator, the capacity of the cooling system, and the temperature of the exhaust. Naturally, the smaller the fan, the less the capacity of the cooling system, and the cooler the exhaust for a given horsepower output, the more efficient the engine because it is not wasting as much of its heat but is instead converting more of the latent energy of the fuel into useful work. In other words, the greater the loss of horsepower through parasitic waste, the less efficient the powerplant—not only because less usable horsepower is produced, but also because specific fuel consumption is increased. To overcome excessive parasitic horsepower loss, some manufacturers must rely on complicated modulating fans which cut out at higher rpm's—proof of lower thermal efficiency.

Q: In addition to horsepower, economy, low maintenance costs, size and weight, what other factor should be considered?

A: Range of operating speeds, which must be such as to provide maximum engine flexibility without lugging. This is achieved by having as high a governed speed as is possible with piston speed kept within good standards of engineering practice.

What diesel engine is of optimum displacement and designed to meet critical present-day demands? The next two pages tell the story...

Bottrill, Witte appointed to NFPA chimney Group

THE NATIONAL Fire Protective Assn. has appointed a task group "to study the problem of forced venting of appliances burning various fuels." This is of special interest to the oilheating industry, since we have been handicapped for lack of such a study in view of the gas industry's B-vents.

The chairman is L. W. Vaughn, of UL Canada, and members are Dave Bottrill, Oil-Heat Institute, J. Herbert Witte, Underwriters Laboratories, C. E. Blome, GAMA, and Richard G. Gewain, who is secretary of the NFPA Committee on Chimneys and Heating Equipment and on the staff of the National Board of Fire Underwriters.

Letter

LIEBLICH OIL BURNER, INC.
New York 23, N. Y.

Editor:

Kindly settle a matter for our staff. The service department manager bills holiday or Sunday service with wording, such as "Sunday Contingency" or "Washington's Birthday Contingency." Your magazine is credited as the source for the wording.

Our language purist quotes a dictionary which states, "Contingency: something that may happen but of which there is no assurance." Our man insists that "Sunday Emergency" or "Holiday Emergency" is correct.

CHESTER LEWANDO

Editor's note: I see no argument about using "emergency" instead of "contingency," but feel that "contingency" is more intelligent for our purpose.

The word "emergency" connotes something quite drastic or unpleasant and we dislike to generate that feeling in view of competition today.

In common usage, the word "contingency" indicates a standing by for good service in case it has to be rendered at an unexpected hour or day. I think its use has much more the feeling of expressing your willingness to take care of the customer, come what may, while the word "emergency" carries much more the flavor of a fire department or gas explosion.

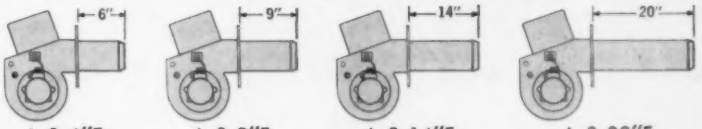
BELIEVE IT OR NOT!

an "8 in 1" OIL BURNER

★ The only burner in the world approved by all U.S.A. testing agencies for firing from .65 gph to 2.50 gph without any component changes except the nozzle. Thus a single burner will satisfy 95% of the installations encountered by the average dealer each year.

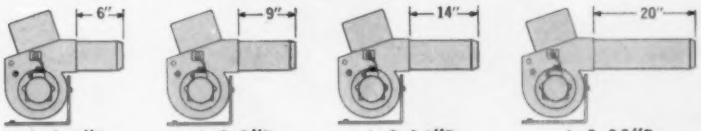
★ The only burner in the world which is convertible in the field to give dealers the equivalent of eight different burners. Thus, in a matter of minutes, you can convert a Rexoil A-2 into the following special-purpose burners.

Flange Mounting on New Boilers, Furnaces, and Water Heaters



A-2-6"F A-2-9"F A-2-14"F A-2-20"F

Pedestal Mounting for Replacing Obsolete Burners and Converting Existing Units



A-2-6"P A-2-9"P A-2-14"P A-2-20"P

★ The only burner in the world designed to give you "8-in-1" interchangeability on a minimum investment. Trade price of this complete Kit is only 15.9% of the amount you would have to invest in all 8 burners needed for the applications shown above.

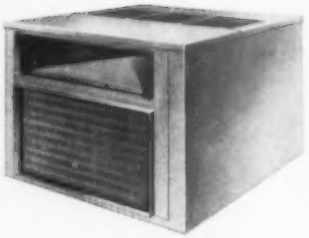
Show this advertisement to your local Wholesale jobber today!

With each 8-in-1 Kit you get:

A-2-9"P Burner and Control Set
6" Tube and Electrode Assembly
14" Tube and Electrode Assembly
20" Tube and Electrode Assembly
Universal Cast Iron Flange

Each Rexoil installation automatically "sells" your next job!

REIF Rexoil INC.
Telephone: WAshington 2420
37 CARROLL STREET
BUFFALO 3, N. Y.



HEAT PUMP WEATHERMAKERS

There's one for every home, every business. The residential line spans the field from a ½-ton Portable for a room to a 4.7-ton two-piece model for a mansion. The commercial line ranges in capacity from 7 to 30 tons, with components to tailor-make a system for the largest installation.

NEW CARRIER AIR PURIFIER

Latest product of Carrier research, this sensational new Air Purifier is a major advance in the techniques of air purification, cleaning, odor removal and humidity control. Easily attached to a forced air furnace —or air conditioning system. Self-cleaning filter. The newest exclusive for Carrier dealers.

CARRIER CLIMATE CENTER

Another Carrier first. Dramatic Climate Center enables the homeowner to tell the weather at a glance, "dial" the climate he wants in his home, also make sure his air conditioning system is operating efficiently. All this from an 8 x 14" satin aluminum panel that installs easily between the studs in any room.

CARRIER ROOM AIR CONDITIONERS

The Royal Family of Air Conditioning, with power models for the largest rooms . . . prestige models for the finest homes . . . promotion models for price-conscious buyers. Twenty-two models, from the ½-hp "carry home" Portable to superpowered 2½-hp Imperial provide a model for every prospect on your list.

OUTDOOR REFRIGERATION UNITS

These versatile air-cooled units can be combined with various indoor cooling coil sections to provide summer air conditioning in new and existing homes, stores and offices. They can be installed almost anywhere—on rooftop, in yard or breezeway. Capacities: 1.8 to 10.7 tons.

COMMERCIAL WEATHERMAKERS

Used singly or as part of a multiple unit air conditioning system, these self-contained units can serve a room, a floor, two floors or an entire building. Can be installed with or without ductwork, built into the wall or located completely in the air conditioned space. Three to 30 tons.

ONLY A CARRIER DEALER HAS EVERYTHING

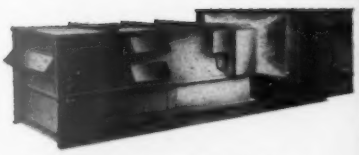
for heating and air conditioning!

That's a strong statement, but it's fact. Only a Carrier dealer has everything to meet the needs of every commercial and residential customer. Just look at the scope of the heating and air conditioning lines shown here!

And that's not all. Each Carrier line leads its field with the latest technical developments. A Carrier dealer not only has the largest selection of products to sell, but also a steady flow of new products.

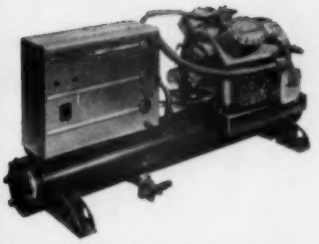
More? More! Carrier backs its dealers with everything to help business boom—for example, engineering help on the difficult jobs, continuous training in modern techniques, special credit on inventory, liberal financing plans, promotional help—many more!

Want the complete story on the most valued franchise in the industry? Call the Carrier distributor in the Yellow Pages. Or write Carrier Corporation, Syracuse, N.Y.



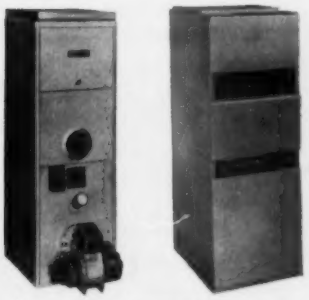
ON-THE-ROOF WEATHERMAKERS

Latest advance for heating and cooling one-story buildings, this new Carrier unit installs on the roof, occupies no valuable floor space whatsoever, uses only a minimum of ductwork and permits uncluttered ceilings. A big seller commercially. Capacities: 7.5 and 10 tons for cooling; 200,000 and 250,000 Btu for heating.



CARRIER APPLIED SYSTEMS

Carrier is the first to offer a complete line of hermetic condensing units up to 120 tons capacity for both air conditioning and refrigeration service. Also available for applied jobs are complete lines of compressors, evaporative and air cooled condensers and other components. A dealer can handle any applied job with Carrier.



OIL AND GAS FURNACES

Brand new design ideas, new components and new standards of performance are built into these new lines of gas-and-oil-fired Winter Weathermakers*. Each has features that make the addition of summer cooling easy and inexpensive. Four models: Upflow primarily for vertical discharge into ductwork; Downflow for homes with concrete slab or crawl-space foundation; Horizontal for homes with basements; Lowboy for basements where headroom is at a premium. Gas-fired bonnet capacities: 60,000 to 160,000 Btu. Oil-fired: 84,000 to 185,000 Btu.

*Reg. U.S. Pat. Off.

BETTER AIR CONDITIONING FOR EVERYBODY EVERYWHERE

Carrier

fueloil & oilheat

NEW

Air Cooled Luxaire® CONDENSING UNITS

Reduce Air Noise and Nuisance to a Minimum

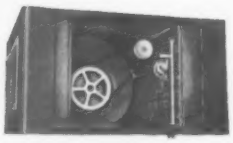
New! 2 H.P. and 4 H.P. Condensing Units — Upward Air Discharge — Peak Capacities — Outdoor Installation!

- **Low Velocity Top Discharge**
- **High Capacity Performance**
- **Compact, Rugged Construction**
- **Unexcelled Accessibility**

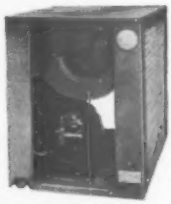
Advanced — Round, Plenum Cooling Coils

Compact — Duct Cooling Coils

Versatile — Counterflow Cooling Coils



Air Handling Blower-Coil Units



3 H.P. and 5 H.P. Condensing Units — Top Discharge — High Capacities — Outdoor Installation!

• Here — for your 1960 business — is a complete line of 2, 3, 4 and 5 Ton Luxaire Cooling Units that match Luxaire Heating Units with rugged construction, uncomplicated design and installation ease!

Minimized — with the completely new 2 and 4 Ton Luxaire Air Cooled Condensing Units — are the twin nuisances of noisy operation and high velocity air discharge. A powerful propeller fan, housed *inside* the cabinet, blows air *through* the top-mounted condenser coil for low velocity discharge.

A rigid cabinet, constructed of 16 Gauge Zinc Coated Steel with Vinyl Coated Grilles, provides extra durability for outdoor installation.

Together, the advanced Luxaire Condensing Units and versatile Luxaire Cooling Coils — Upflow, Horizontal Flow, Counterflow and Blower-Coil — make an air conditioning team that is unsurpassed for flexibility, performance *and competitive price!*

And the Furnace that will enhance your installation is today's Luxaire — more desirable and competitive than ever, with increased air handling capacities all along the complete line!

See your Luxaire jobber, *today!*

Upflow Gas and Oil Furnaces — Plenum Cooling Coil

Counterflow Gas and Oil Furnaces — Counterflow Cooling Coil

Horizontal Gas and Oil Furnaces — Duct Cooling Coil

Basement Gas and Oil Furnaces — Plenum Cooling Coil

Combination Year 'Round Units — Gas or Oil Fired — Air or Water Cooled

THE C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

Luxaire® HEATING & AIR CONDITIONING UNITS

How to "tell 'em nice"

Atlantic City Promotional Conference of National Fueloil Council featured 15 Panels on Advertising and Communications Methods

THE TWO-DAY promotional conference of the National Fueloil Council held at Atlantic City March 10-11 was the seventh of its type since the industry's cooperative advertising campaigns for oilheating were launched in 1955. It was the second under NFC auspices, the earlier five being sponsored by the predecessor organization, Oilheating Market Reports.

However, their purposes were the same, to advance the cause of oilheating acceptance through education in better methods of advertising and general publicity.

This time the crowd was larger since there are now 64 campaigns, of which 11 have just been approved so the 53 prior ones were each represented at the conference. With two or three individuals appearing from most of the project cities, plus major oil company representatives and advertising specialists of various sorts, the attendance was upward of 150 persons.

As a departure from earlier meetings, this time the program was almost entirely devoted to panels of which there were 15, each with four to six participants. These men were selected for specific subjects based upon some particular emphasis developed in their local campaigns.

The 53 campaigns operating in 1959 invested just above $2 million in promotion, half raised by the oil men of the area and the other half supplied from refiners through the office of NFC. For 1960 the forecast is that 70 campaigns will invest $3 million.

Fred Burroughs, NFC secretary, and Ralph Hartell, director of communications, were principally responsible for the scope of the program.

J. L. Minner, Shell Oil Co. and chairman of the National Fueloil Council keynotes the opening session at Atlantic City on March 10. Seated to his left is Robert Gray, president of the Council and Irving Oelbaum, president of the Oil Heat Council of New Jersey.

Small market Promotion

Panel chairman, Franklin Steinhardt, Albany, N. Y.; moderator, Robert Gray.

Participating: Amsterdam, N. Y.; Binghamton, N. Y.; Newburgh, N. Y.; Reading, Pa.; and Spartanburg, S. C.

BY SIZE, the small markets taking part in this panel had budgets ranging from $500 to $8,000 and between 18 to 31 marketers cooperating in the local program. According to Gray, one third of the National Fueloil Council campaigns are under $10,000.

Getting the most mileage from these relatively limited funds is the chief concern of this group. Newspaper space is considered a good buy—each of the panel markets does some newspaper advertising and Spartanburg puts their entire budget here.

Taking advantage of the widespread interest in sports, Binghamton invested two-thirds of their budget into television, selecting the New York Giant football games to carry the commercials. Sports got the emphasis in Albany too, where they sponsored spot announcements during the World Series followed by a saturation two-week period of cartoons.

Most of the markets maintain year round newspaper schedules, with heaviest concentration in the Fall and Spring. Reading, Pa., runs their biggest ads right after the gas company does.

Perhaps the most effective area for these markets is their really good public relations. Members are usually leaders in the community and are able to get cooperation from newspapers.

Newburgh has hired a local newspaper man to handle their public relations. That is about as close to the source as you can get, because he is able to hold down misleading stories.

A good suggestion came from the group advising marketers to contact volunteer fire departments and indoctrinate them in the safety of oilheating. Local companies should cooperate with these fire departments by becoming members.

Such participation can pay off. In upstate New York, a page one story blaming fueloil for an explosion was retracted the next day on page two with the headline: "Oil cleared—gas to blame." An oil company employee was a volunteer fireman and managed to set the record straight.

Integration of suburban market Programs

Panel chairman, Al Woosnam, Suburban Philadelphia; moderator, P. T. Lomenzo, Atlantic Refining Co.

Participating: Buffalo, N. Y.; Chester County, Pa.; Delaware Valley, Pa.; Grand Rapids, Mich.; New York, N. Y.; Niagara Falls, N. Y.; North Penn, Pa.; Philadelphia, Pa.; and Tri-County, Pa.

A DIFFICULT problem in many markets involves a metropolitan city and the surrounding suburbs. The smaller suburb undoubtedly gets benefits from the larger city, and yet the suburban programs do generate their own enthusiasm that would not be tapped by a single program. To discuss how some of these programs are coordinating their efforts was the purpose of this panel.

The Buffalo and Niagara Falls markets use the same managing director for their separate groups; they also sponsor joint television commercials. On a wider base, they are working on planning studies to find out where the business is and where the expansion and growth in Western New York and adjacent Canada is likely to be. The thought is that they will find the need and then be able to supply the solution.

In Michigan, the Grand Rapids campaign works with the Kalamazoo and Muskegon groups. The directors and members of the advertising committee are elected from all three groups to plan promotion which will be used with slight adjustments to the market. Statewide integration of six programs using a similar theme is anticipated.

Cooperation in the nation's largest market was described by the representative from the metropolitan New York area. Here five associations financed radio spots using "Little Bill" commercials. Some 3.5 million people heard the commercials. The effect was measured by a survey some months later and at that time 50% of those questioned remembered the "Little Bill" message; 42% associated it with oil; 35% associated it with economy and one third could repeat the slogan.

Eleven associations are active in the suburban Philadelphia area, and four campaigns with dissimilar themes are in existence. They admit that they do get assistance from the Philadelphia media, but do insist that the small communities must have some control over funds.

It is the feeling of the big city that the advertising in the Philadelphia papers dominates the surrounding 14 counties. They, therefore, ask for controls on local situations that would avoid duplication on advertising.

Moving Billboards

Panel chairman, Charles Cockey, Baltimore; moderator: Charles Kramb, Gulf Oil.

Participating: Baltimore, Md.; Philadelphia, Pa.; Providence, R. I.; Richmond, Va.; St. Louis, Mo.

MOVING BILLBOARDS were defined as those affixed to trucks, taxicabs, busses or streetcars. However, included in the discussion also were the stationary billboards situated along highways and at busy intersections in cities.

Baltimore concentrates on taxicab moving billboards, using 150 taxicabs —one out of every 10 in the city. The posters travel all over the city and actually reach just about every area and locality. The posters are on the streets of Baltimore every other week, except during the Summer and the local group is convinced that the posters provide as much visibility as stationary billboards and perhaps more.

Philadelphia's traveling billboard effort involves painting fueloil trucks of dealer members in a sparkling white motif. The Oil Heat Council of Philadelphia is using the plan to stress the cleanliness of oilheating and cover the area with an increasing number of uniformly-painted fueloil trucks. General copy and art is to be supervised by the Council to insure uniformity. More detail on the plan appeared in the January 1960 issue of FUELOIL & OIL HEAT on the front cover and on page 116.

Providence (which includes Fall River, Mass. in its area) allocates 10% of its $75,000 budget for 24-sheet posters and bus panels. They emphasize four basic themes: Safety, Economy, Home building, Dependability. An estimated 75,000 people see the bus cards every day. Next will be the addition of truck signs for members' tank trucks.

Richmond, Va. used taxi posters, chosen on the basis of cost. They were available for $2 per week per cab, an estimated cost of 3¢ per thousand exposures. The messages used were short and adaptable to taxi posters, tied in with and supplementing newspaper builder ads. Oil heat and quality

homes go together was the theme emphasized. After two years, however, measurable results were somewhat disappointing and the group turned to 24-sheet posters.

St. Louis is using 24-sheet posters and taxi cards, each with these identical themes: Comfortable, Safe, Clean and Install oil Heat. One-third of a $30,000 budget goes to billboards, securing an estimated 10 million impressions a month on the 24-sheet posters and better than 65,000 impressions each week on the cab advertising. The taxicab posters are available on 50 cabs for $3 each per week. The group is using the same program this year and will adapt the taxi posters for use on fueloil trucks.

Oil-powered appliance Selling

Panel chairman, Bob Lynch, Hartford; moderator, Charles Blood, Esso.

Participating: Baltimore, Md.; Gary, Ind.; Hartford, Conn.; Long Island, N. Y.; Stamford, Conn.

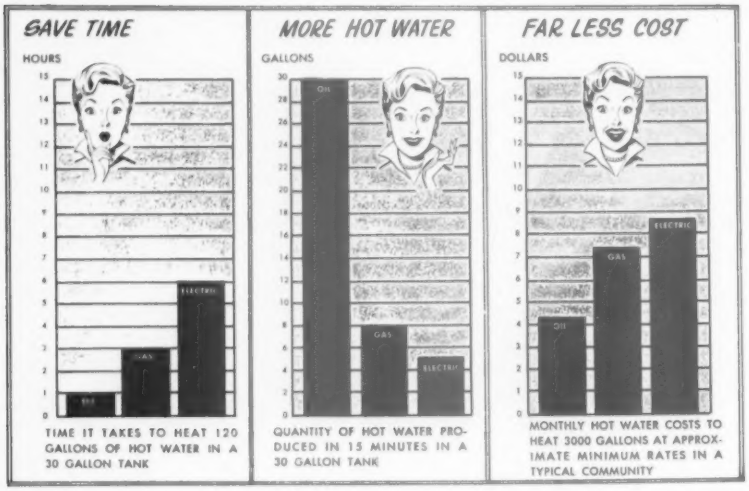
THIS DISCUSSION began with a challenge. The industry must promote and sell oil-powered water heaters before it is ready to take on incinerators and any new applications that might be developed. The water heater is probably the only source of gain now in saturated markets. Utilities are particularly vulnerable on their water heater load where they charge their highest rates giving fueloil a fine price advantage. Because this load is important, utilities will defend it with advertising taking money from their heating budgets.

Four Connecticut associations have had different plans of selling water heaters. In the southwestern part of the state, the association organized the group as a single company promoting water heaters. Salesmen from the participating companies sold the equipment and were repaid with an incentive plan with prizes.

In Danbury, where the oil men have to work against a difficult utility, the weapon was to offer customers $25 on their old water heater against the pur-

CLEAN as Oil Heat
OIL HEAT INSTITUTE OF ST. LOUIS
SAFE as Oil Heat
OIL HEAT INSTITUTE OF ST. LOUIS
COMFORTABLE as Oil Heat
OIL HEAT INSTITUTE OF ST. LOUIS
Install OIL HEAT
clean, safe, economical
OIL HEAT INSTITUTE OF ST. LOUIS

Reproductions of four billboards used in St. Louis. This particular series received honorable mention in competition among outdoor billboard advertising.


SAVE TIME
HOURS
TIME IT TAKES TO HEAT 120 GALLONS OF HOT WATER IN A 30 GALLON TANK
MORE HOT WATER
GALLONS
OIL
GAS
ELECTRIC
QUANTITY OF HOT WATER PRODUCED IN 15 MINUTES IN A 30 GALLON TANK
FAR LESS COST
DOLLARS
OIL
GAS
ELECTRIC
MONTHLY HOT WATER COSTS TO HEAT 3000 GALLONS AT APPROXIMATE MINIMUM RATES IN A TYPICAL COMMUNITY

chase of an oil-powered one. Over in Hartford, the association ran a four-week saturation campaign bolstered by a clever consumer booklet well-illustrated to sell the equipment.

A single ad pulled 180 leads for water heaters in New Haven. The problem was the dealers weren't ready for the business. In this case, the dealers followed the advertising into a new realm of business.

Dealers are needed to sell this equipment; the public must be sold. According to the Connecticut panelist, the best way to sell the equipment is tell women that this is a new appliance for the home. Use comparative figures on the costs of heating water. Point out that utility bills will be low. Oil heat and hot water go together.

Down in Baltimore, the oilheating picture shows some 175,000 accounts; 500 servicemen taking care of these burners; and no salesmen selling equipment. It was the Association's thought that all these servicemen could be utilized to sell oil water heaters to replace electric.

A contest was organized, and frankly, in spite of a tremendous price advantage against electricity, the results were disappointing. A $25 reward was offered for each conversion and only $175 was paid out.

However, one goal of the contest was to stimulate interest among the dealers. And now some time later, there has been a delayed reaction with dealers asking for more information and getting interested in the market.

The best known water heater promotion has been done on Long Island. They started in 1956, and since then have installed nearly 30,000 oil-powered hot water heaters adding up to more than $7 million in gross sales. This program had an interesting impact on the local utility: in 1955, its revenue from gas hot water heaters gained $274,000; in 1956, $286,000; but in 1957 it dropped $141,000 and in 1958, it dropped another $654,000.

The group has had a four-pronged attack (newspaper, direct mail, public relations and display) with principal concentration in May and June and a secondary concentration in September and October. Advertising stresses savings and the luxury of having plenty of hot water.

Warm air heating dominates the Gary, Ind., market and dealers have discovered that the electronic air filter takes the burden off the cleanliness impasse. The unit sells for $200-$250 for a domestic installation.

Staging a Contest

Panel chairman: James E. Grady, Westchester; moderator, D. E. Hoffman, Tidewater.

Participating: Westchester County, N. Y.; Franklin County, Mass.

THE FRANKLIN Oil Heat Council ran a 30-day contest and used newspaper promotion on the consumer level to get replies. It cost them $750, and the realization that they didn't utilize all the free publicity angles. In the future, they would add a tag line to all dealer advertising to tie-in with the contest.

Eight considerations on running a contest were presented by Grady. First, the contest must have a purpose. It should be called upon to solve a problem. For instance, if testimonials are wanted a contest can get some good ones.

2. Prizes—Don't be stingy. Prizes are the alternative to an equal or greater expenditure on some other form of advertising and should make it worthwhile for the contestants to enter.

3. Requirements to enter—it is a good idea to request an acquaintance with or information on product.

4. Rules—they should be simple and brief, yet complete and legal. Protect yourself against awarding duplicate prizes.

5. Judges—they should be impartial, but if at all possible picked to give other advantages. Westchester got the local builders organization to provide judges, thus had the men they most wanted to impress reading oil-heating testimonials.

6. Bonuses—offering a bonus to contestants if they are a customer of a member dealer makes people aware of members.

8. Publicity—one of the biggest advantages of a contest is the free editorial space the press will give when local residents are contestants or winners. Prepare releases and pictures when the contest is announced; when the prizes are put on display; when the number of entries is tabulated; when the winners are announced; and when the prizes are awarded.

Selling to and through the Builder

Panel chairman: Lavern Schaetzel, Wisconsin; moderator, L. S. Marshman, Mobil Oil Co.

Participating: Buffalo, N. Y.; Harrisburg, Pa.; Indianapolis, Ind.; Norfolk, Va.; Rochester, N. Y.; Westchester County, N. Y. and Wisconsin.

L. S. MARSHMAN opened this panel by describing the acquisition of new home business as the most important problem facing the industry.

A half hour television program is sponsored by the Wisconsin group, and it has proved extremely successful in getting builder business. In effect, what the show does is sell the builder's houses for him by providing a showcase for the home.

There are three sponsors of the program, and each of them picks three homes. These nine houses are toured with a camera and a moderator. In order to have his home displayed, the builder must promise to put oil in the home.

Builders like the program; they have found that it does sell. A home that had been on the market for two years was sold the same day that it had been on the program. In its earliest days, the builders had to be convinced, but now they are more than cooperative.

In Buffalo, the fueloil men have a four-point program to influence builders. They will pay up to 50% of a real estate ad providing oil heat is mentioned. They give the builder free fueloil until the house is sold. They provide tract signs and on Sundays, when the traffic is highest, they will have a hostess and a real estate agent on duty in the model house.

Also providing free heat is the Rochester group. It was pointed out that this is one thing the gas company cannot do. Oil has the price advantage here so that the speculation builder can be sold on oil heat. In fact, there are two builders in the area who ask $125 more for their homes using gas.

Dealers selling oilheating equipment to the builders take less than a normal markup to provide a competitively priced installation. Besides the free oil the builder is offered cooperative advertising (both newspaper and TV), free tract signs, and a hostess service.

The result: The fueloil industry in Rochester is now getting 10% of the new home business compared to 1% a year ago. The target for 1960 is 18%. Six developments are installing oil as standard equipment and working agreements with 33 builders on both high and low cost gas lines are in effect.

The Tidewater Association in Virginia pays the builder's costs when oil-heated homes are advertised. The theme, "Quality homes have Oil Heat," is used in much of the group's advertising. Builders tie-in to the promotion without requiring a subsidy on equipment.

Another tool is featuring the same house on TV that has been shown in the daily newspaper. The group sponsors a weather show in the evening. This year, they are buying three-second spots on radio and the words—"Quality homes have oil heat" will be repeated some 200 times on Fridays, Saturdays and Sundays.

Because of the local situation gas is not a big factor in the Indianapolis market. During the home show in the spring, 55 of the 60 homes were oil-heated. As members of the Marion County Builders Association, the fueloil men also take part in the fall Parade of Homes.

Harrisburg concentrates its program on better quality homes. The builder is provided with billboards plus smaller signs and is always provided with prompt service on equipment.

A plan to subsidize new home equipment was offered by Westchester. This would be a self liquidating program offering a $150 subsidy to the installer so that oilheating equipment would be competitive. The income from the account would retire the fund over a period of five years.

Trade Characters and Symbols

Panel chairman, Lester N. Lukkason, Long Island, N. Y.; moderator: J. E. Nidecker, Cities Service.

Participating: Central North Carolina; Eastern North Carolina; Kingston, N. Y.; Macomb County, Mich.; Oakland, Mich.; Niagara Falls, N. Y.; Westchester County, N. Y.

IN EXPLORING the development and use of trade characters and symbols, the panel revealed that a lot of scientific and serious study had been given the subject. A number of areas have adopted the basic Little Bill symbol, developed by the Oil Heat Institute of Long Island; in some instances the theme and make-up of the symbol has been altered to meet local conditions.

Central North Carolina has developed an image or symbol usable in the 19-county area the group covers. The symbol was designed to be modern, to identify oil heat as clean and up-to-date. The symbol consists of "Oil heat" in slanted modern type, with an oval "O" surrounded by a yellow oval and a white center spot radiating warmth. It depicts very well the warmth and comfort oil heat produces and is adaptable to use either in color or black and white. It serves universally as an identifying symbol in advertising, billboards, stationery, business forms or any number of other applications.

The Eastern North Carolina group makes use of the Little Bill theme and uses a little boy in sleepers to denote warm and comfortable oil heat. The character wears a truck driver's hat labeled "Little Bill." There is also considerable attention paid in this area to the market for tobacco curing with fueloil.

The Eastern North Carolina expressed the opinion that there existed a need for one uniform characterization of Little Bill that all NFC programs could adopt.

Kingston, N. Y., through its organization in Ulster County, Hudson Valley Dealers Association, leans

heavily on an identifying symbol for its members. The group uses the seal in all its promotion and advertising to identify each participant in the local campaign. The seal is topical in that it shows the Catskill Mountains in the background and the Hudson River in the foreground, important and well-known landmarks in the area. An oil tanker and bulk plant tanks pinpoint the identification to oilheating.

Macomb County, Mich., an area to the north of Detroit, makes use of a symbol with an oil flame to suggest warmth and comfort. In Michigan there are six organizations, each with its own different identification symbol. A move now under way is aimed at the adoption of a uniform insignia.

In nearby Oakland, Mich., the dealers introduced an identifying symbol in large space newspaper advertising last Fall. The "fireman" figure is used in all advertising, is available as truck decals and mats for dealer members to use. The group plans a contest to name the figure.

Niagara Falls uses a Scotch Lassie character to signify the thrift gained when using oilheating. The character appears behind the announcer during local TV programs and is used to identify the dealer members with community activity and enhancement. The group is also distributing space calendars to schools locally to capitalize on the current interest in the subject. They incorporate the oilheating message in a discreet fashion.

Westchester County is another area that has used Little Bill effectively to the point where he has been animated, given a voice for radio spots, with every Little Bill ad referring to the Little Bill dealer in the Little Bill telephone book listings. Members tie-in their own advertising using mats, decals and postage meter slugs. In fact, Little Bill is handled in such a way to imply strongly that Little Bill runs the group's advertising, its promotion and contests with the idea that this concentrated use will give the program tangible identification.

Oilburner service Schools

Panel moderator, J. L. Minner, Shell Oil.

Participating: Baltimore, Md.; Indianapolis, Ind.; Southwest Connecticut; Washington, D. C.

THE GENERAL TOPIC considered the teaching and training necessary to develop competent oilburner installation and servicemen. The various markets which recounted their experience covered instruction for men already employed in the industry as well as neophytes or trainees.

In Baltimore the local association has been working for some time with the Mergenthaler Vocational School where day classes are held for high school students from September to June. This instruction includes academic subjects. Other classes are available to men already employed in industry, both trainees and experienced personnel.

The Baltimore group circulates a booklet, "Behind the Thermostat," among school children to explain the oilheating industry to them and interest them in training as a serviceman.

Cooperative Training

The problem in Indianapolis is somewhat different in that fueloil dealers typically do not service equipment. Thus, the industry works with the Heating and Airconditioning Association to conduct service schools in the public schools system. Members of the association donated equipment for two classroom set-ups and the OHI of Indianapolis purchased the OHI library of service films and the equipment needed to use them. Also, the curriculum developed by OHI of America is used in the school, with the graduates certified as OHI Technicians with diploma and wallet card.

The Southwestern Connecticut Oil Heat Council has a training program to upgrade oilheating personnel and teach new techniques. It is essentially designed for employees and covers oilheating technical topics. More recently the course was expanded to include sales orientation to acquaint the serviceman with constructive sales information.

Since 1948 there has been a school sponsored by the local oilheating association in Washington, D. C. It ran successfully for five years and for a time included vocational training for high school students. Principally, though the school has been operated to upgrade servicemen already in industry. This school also uses the OHI training films.

Two significant thoughts emerged from this panel. First, as a general rule, it is extremely easy to secure fine cooperation from public school authorities where facilities exist for vocational training. Second, securing and keeping competent instructors presents some problems. However, where

there is industry interest and cooperation, training schools have resulted in very beneficial effects for the industry and its customers.

Home Show and Fair Exhibits

Panel chairman, E. E. Esterline, Philadelphia; moderator, Vincent L. Verdiani, Sun Oil Co.

Participating: Hartford, Conn.; Philadelphia, Pa.; and Springfield, Mass.

THREE GOALS to keep in mind when planning an exhibit are: Give the people something. Give them something to do; Give them something to do that they will enjoy. With this in mind the Philadelphia fueloil men went into the local home show with excellent results.

A carnival theme was decided upon and then the work began. Some tips to others planning shows are as follows: Get firm estimates on cost to build booth. Keep after builder during the construction process so that he won't attempt to cut corners. Get dealers to contribute prizes. Be sure you have enough manpower in the booth at all times. Use promotion from show to sell own members.

The Philadelphia exhibit consisted of four carnival games. The public was given four "little bills," play money, to bet. In the first booth was a large wheel of fortune bearing five key words: Convenient, Safe, Dependable, Thrifty and Clean. Next was a bean toss, then a truck race run like the traditional horse races with the mounts moving on the spin of a wheel. The final booth had a large dice cage with one die reading "oil heat" on all sides and the other carrying the key words.

Each day of the show, 200 gallons of fueloil were given as a prize with a final prize of 1500 gallons being awarded at the end.

The sales message "Clean—convenient—safe—thrifty and dependable" was pounded throughout the exhibit. Some 30,000 prizes were distributed. The area was constantly crowded and the competition's booths went begging by comparison.

The Eastern States Exposition held last September in West Springfield, Mass., was attended by a half million people. Through the efforts of fueloil men, the theme was oil. A modern drilling rig and a reproduction of Drake's well were recreated on the grounds.

A year's supply of heating oil was awarded each day of the Exposition, and thousands of shopping bags imprinted with oil heat's slogan were given away.

Additional publicity was given fueloil at the horse show when the grand champion trophy was awarded by the association president.

The small mobile unit has its place in telling the oilheating story too. The Hartford organization has built one for displays in banks, schools or meetings where the institutional type message can be told.

To make this rewarding you need an axe to grind. For instance, the Hartford booth points out that oilheating is a vital part of the business picture in the city with its investments and employees.

Bob Lynch making the Hartford presentation suggested that there is a need for a pool of these small exhibits. Such a pool should be held in a central area to be used by individual associations.

Electric heat Competition

Panel moderator: J. W. Lang, Coastal Oil Co.

Participating: Hartford, Conn. and York, Pa.

THE PANEL explored the effects of electric heat competition in two markets where it is a reality.

Bob Lynch, representing the Hartford, Conn., area, described the activity of the electric utility there in promoting electric heat on a selective basis. The utility picks its spots and does not go after business on a wholesale basis. They are careful to be sure that there is the 6-4-2 insulation required for electric heat and they do a fine job in promoting such installations as they have made.

For example, in one model home which attracted a large crowd on a Sunday, the pine paneled basement contains signs, such as "Here is where the oil tank would be in an old-fashioned home," and, "Here is where the furnace would be in an old-fashioned home," with further references to the space saved and the fact that there were no pipes to restrict movement.

Guaranteed Costs

In addition the power company was guaranteeing heating cost with electricity as no more than $75 above the cost for heating with oil. They minimized this discrepancy by selling the space saved in the basement, emphasizing that there were no service or maintenance costs and convincing purchasers of the advantages of electric heat.

Lynch concluded with the observation that the utility picks its spots for electric heat installations and wondered, "Maybe they're doing it so slowly, we won't see them coming."

Charles Eyster covered the electric heat situation in York, Pa. He pointed out that gas in the area was 40% lower than oil which led the oilheating people to sell their jobs beyond the gas mains. Now, however, electric heat competition is making even this market difficult. Eyster said that the utility has in the last year sold 300 electric heat jobs in new homes, plus three schools and three churches at a heating rate of 1.6 kw.

Eyster outlined a plan being considered by the York oilheating group to show a modern home with an oil-fired warm air heating system. His point is that the fueloil dealers can emphasize the ability of the homeowner to add airconditioning when he is ready for it. On the other hand, the electric utility cannot sell the same type of installation because they are reluctant to install electric heating equipment in ductwork.

Part of the plan being developed would provide for a trial installation of an oilheating job. This would involve a guaranteed fuel cost, with no interest or payments for a full year. The first stage of the program envisions preparation of specifications which would enable an oilheating job

to match and in some respects surpass Gold Medallion Home requirements, which include electric heating and cooling.

TV promotion in large and modest-sized Markets

Panel chairman, Bob Cullen, Boston; moderator, W. C. Scheitlin, Standard Oil Co. (Ind.).

Participating: Boston, Mass.; Fort Wayne, Ind.; North Carolina (eastern); Watertown, N. Y.; and Wisconsin.

ONE OF THE CHIEF objectives of these conferences is to show markets what others are doing and thus spread the value. For instance, films originally prepared by the Boston group at great cost, have been purchased by the Eastern North Carolina Council for use on the local TV stations for $5.98.

This group puts most of its emphasis on selling installations and lets the fueloil take care of itself. By buying small time segments they can concentrate on prime time or adjacencies to prime time.

The Wisconsin panel member pointed out that a builder has a good idea of all of his costs except the cost of selling the home, and that's where the group's "Showcase of Homes" TV show has been doing a splendid job. Wisconsin OHI actually does it for him.

To get on the program, the builder commits at least 30% of the homes in his development to oil heat. Three sponsors split the $1500 weekly cost —and this cost has brought at least 1,000 new homes to oilheating.

Fort Wayne spends 80% of its budget on TV. Because of the competitive situation among the local stations, they have found that they get more cooperation from TV than they get from the single city newspaper.

They spend all their money on live shows sponsoring two day-time shows for women, plus a men's sport show.

With a relatively small budget, the Watertown, N. Y., market selected TV to carry the oilheating message for maximum coverage and adaptability. Their themes stress that oil is "Clean as a whistle," that its use results in safety and serenity.

They also point out that oilheating dealers are neighbors of the viewers and that regardless of the house—oil is economical.

In the Boston area, there are some 100 daily newspapers, but the three local stations cover the entire metropolitan market. In addition, 92% of the people do have television sets.

Thus, Boston invests close to $200,000 in TV. These spot commercials are usually 20 or 60 seconds in length. Expensive to produce (three new ones cost $9,942), the commercials are offered to other markets just for the cost of reproducing them.

Oilheating Testimonials

Panel moderator: William H. Bohn, Hartol Petroleum.

Participating: Danbury, Conn.; Kingston, N. Y.; New York City.

THE DEALER GROUP centered around Danbury, Conn., makes extensive use of testimonials, regarding them as a strong advertising medium. They add readability, secure additional attention, document the advertiser's story and acquaint consumers with the class of people buying a product.

As part of the testimonial program, the group established two personalities, Helen Martin and Hal Arnold and used them to tell the story of oil heat. Also, the campaign includes a group of ads and tie-in direct mail pieces on why users switched to oil.

The Kingston, N. Y., group urges each of its 30 members to submit possibilities for testimonials so that the advertising department can follow them. An effective approach has been the promise to run a picture of the home or business establishment involved with the testimonial. These pictures have been even more effective when they can be taken while an oil delivery is being made. An accompanying benefit has been increased word of mouth advertising when neighbors or acquaintances discuss the ad and many times actually repeat the testimonial statements.

New York City's Better Heat with Oil Council has been conducting a particularly effective testimonial campaign, highlighting oil heat's strongest selling point in the area, price. The testimonial ads, which are large enough to pretty well dominate a newspaper page, tell of actual experiences with installations, detailing actual savings in instances of switching from gas to oil heat. Tie-in ads on the same page by dealers increase the effectiveness of the campaign.

Special utility Situations

Panel chairman, Keith Fletcher, Western Massachusetts; moderator, R. E. Sumner, Delhi-Taylor.

Participating: Buffalo, N. Y.; Hartford, Conn.; and Pittsfield, Mass.

WHEN THE LOCAL utility wanted to run a gas line to Grand Island near Buffalo, N. Y., the oilheating association managed to get a precedent set whereby no Throughway bridge in the state of New York would carry a gas line because of the potential danger. They managed this by working with local and political groups convinced of the danger.

Another situation still in existence in the area is still being publicized. The local utility's franchise ran out, and it has refused to renew thus

(*Please turn to page* 130)

Delivering what We sell

Esso's HEP Program to be offered to Industry; results in first-class Oilheating

by Charles F. Blood*

As "THINKING MEN" I am sure you have been following the trends in heating with particular interest. One of the trends has been the increased competition from other forms of energy. Certainly this has changed our viewpoints. And some people with less vision have become unduly alarmed at some of the statistics.

Let's review briefly what happened last year in oilheating. Actually, you know, it was a good year. Oilburner sales increased 12%, reversing a three-year downward trend. This fact, coupled to the "new look" throughout the whole oilheating industry, is very encouraging. Refiners and marketers for the first time are assuming equal responsibility for promoting oil heat through the National Fueloil Council. Oil heat research has gained industry stature with the launching of API's equipment research program. And the concept of one central fueloil organization has received industry's endorsement.

These facts illustrate two basic developments:

First, the industry has now fully recognized the need and advantages of cooperative industry effort.

Second, the industry is showing renewed interest and enthusiasm in oil heat marketing.

These developments, I believe, forecast an even brighter future—a future with new opportunities for oilheating, filled with challenges to our adaptability and initiative, and our capacity to act with foresight and energy.

We have made tremendous progress. Look at what's been happening in the area of oil heat promotion.

The value of industry-wide advertising was really brought home to us recently in a consumer research study. It showed that 70% of both gas and oil users are conscious of heating ads. This suggests how susceptible oil or gas users are to competitive promotional programs.

But the important thing for all of us to remember is that local NFC advertising campaigns give us all, large or small, an unlimited opportunity to participate and tell our story effectively, positively, and constantly.

The success of these efforts, however, are directly related to whether we render a complete oil heat service. Not only must we sell comfort, convenience, and cleanliness, but we must deliver what we sell.

For approximately 30 years, the oil heat industry has been selling comfort, convenience, and cleanliness, and has been delivering these things as best they could with the tools available.

I think we all know that there are oilburners in operation today—particularly conversion jobs,—that are inefficient, smoky, and difficult to control from the standpoint of temperature. Five years ago, my company recognized this and launched an extensive research program to determine what was needed to produce efficient and clean oilburner operation.

We found out—and the result has been a very powerful public relations and competitive sales weapon. We call it HEP—the Heating Efficiency Program.

HEP is a new, simplified system of determining optimum firing rates and applying a firing rate for clean combustion with maximum efficiency.

Here is the story of the development of HEP:

Back in 1955 when we began to recognize the problem, Esso Research & Engineering Company undertook a program to find the problems which exist in the field.

After the problems were identified, they carried out the necessary research in the laboratory to find ways of improving fuel and combustion equipment.

When a promising modification in fueloil equipment was found, it was thoroughly field tested.

Then the findings of all this research work were applied to heating oil customers.

In a field test, the research people found oilfiring was giving an average

Serviceman here takes a CO_2 reading on a job before HEP modification. Next he uses a smoke-tester in another preliminary survey. CO_2 readings which ranged from 2½% to 9% before modification increased to a range from 9% to 11% after improvement had been completed. Smoke readings came down from 0 to 9 to 0 to 2.

*Assistant manager, Fuel Oil Sales Div., Marketing Dept., Esso Standard, Division of Humble Oil & Refining Co. Condensation of presentation before the National Fueloil Council Promotional Conference, Atlantic City, N. J.

Here's our answer
FOR BETTER PERFORMANCE

REDUCED FIRING RATE
•
INCREASED TURBULANCE

It will . . .
- Decrease stack temperature
- Decrease down-time stack losses
- Improve combustion
- Reduce smoke
- Hotter flame

of only 63% efficiency. This was due to many reasons.

First, we found that by reducing the firing rate, we could cut down on stack temperatures and reduce down-time stack losses. Second, we found that by increasing turbulence, we could improve combustion, reduce smoke, and produce a hotter fire.

All this had to be done with a minimum of change in the customer's equipment and with standard parts and tools. It looked like it could be done, but two new things were needed.

To attain a close match of nozzle spray to air pattern, a new device was developed—the spray pattern device. With this we can match the nozzle spray to the air pattern developed by each oilburner as we alter it. The result was that we could custom-make the peak performance of any given burner right on the job.

Also, we needed a set of guide rules and directions to establish new firing rates correctly and to make the necessary alterations. This was developed in a new engineering manual which simply and clearly describes each step, and provides new tables which can be used to find the proper answers quickly.

A number of field test jobs were installed by the research people to test these methods and formulas.

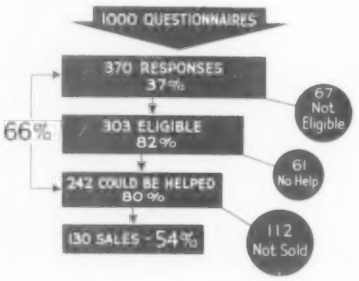
We now knew what we needed to do and how to do it. But could these techniques be applied to customers on a commercial basis?

A simple letter was sent to the customer. It stated that our Research & Engineering Division had developed methods of improving efficiency. No special inducements were promised. We simply offered to inspect the customer's heating system at no obligation, advise him whether it would be possible to improve the efficiency of his system, and what the cost would be.

On the first go-round, we sent out 1,000 mailings and received 370 replies. If you have had any experience with direct mail campaigns, you will immediately recognize that a 37% return is nothing short of phenomenal. Customers really were interested!

Of these 370 interested customers, 67 were eliminated because our techniques would not apply. For instance, if a customer had a rotary wall flame or a special unit, such as GE, we had to leave him out. Where heating or hot water difficulties were encountered, we set these jobs aside for correction before HEP could be used.

Of the remaining jobs, 242 were judged to be HEP prospects as a result of the field survey. Of these eligible prospects, 130, or 54%, were actually sold.



It is interesting to compare sales results in terms of potential dollar savings. As may be expected, where savings were small, only a few customers bought the modifications. As savings increased, so did sales, up to the point where, with $100 saving, everyone bought the job!

In this test, the cost of the modifications to the customer averaged over $68, and ranged from $35 to $116. Predicted savings averaged $65, and ranged from $21 to $224. This was based on an estimated savings averaging 23%, and ranging from 8 to 34%.

And here's an important thing to keep in mind. We were not losing money on making these modifications, in fact, the program is self-supporting. During the course of the test, we found that we could sell the job at a price which included a 30% gross profit!

Our Research & Engineering studies were certainly confirmed! The average efficiency found on these jobs before modification was 64.4%. But after modification, it was 79.7%. It is interesting to note that even after running through a full heating season, these efficiencies had fallen off to only 77%. And this was easily restored to the original level by a simple, normal service check-up.

The actual fuel savings in the test homes were compared to a similar group of homes which were not touched. The data on the untouched homes showed a 2.6% average greater consumption during the season, ranging from 38% more fuel burned to 33% less. The test homes averaged 18.9% less fuel in a range running from an 8% increase to 46% savings. The difference between the averages of the two groups indicated that the HEP program had saved the modified group 21.5% when compared with the unmodified.

The wide range of fuel consumption shows an appreciable change in customers' living habits from year to year. It emphasizes the necessity of explaining carefully to each customer just what the program may mean to him. Efficiency can be predicted accurately, but fuel savings will be attained only if living habits remain substantially the same.

Finally, we had independent researchers contact the homeowners to check on their reaction to the program. This check was made in April which we now think was too early as far as fuel savings were concerned, although 41% felt there were some savings; 55% said that their investment was worthwhile; 82% said their home was more comfortable; 72% said the morning pickup was as quick or quicker. This was important in

INDEPENDENT
Customer Reaction Survey
97 HOMES – 76% OF TOTAL

41% "some saving" (too soon to tell)
55% "investment worthwhile"
82% "home is as comfortable or more comfortable than before"
72% "morning warm-up time as quick or quicker"

INDEPENDENT
Customer Reaction Survey

2/5 had discussed it with neighbors
70% willing to recommend it

1/4 had considered converting to gas
½ of these now content with oil

Definite indications that program strengthened customer relations and good will

view of the reduced firing rates.

Two-fifths had discussed HEP with their neighbors, and 70% of them were willing to recommend it.

Of paramount interest was the fact that one quarter had considered converting to gas, and that half of these were now fully content with oil.

We now had our answers. We knew that a program to improve heating efficiency was necessary for our present customers. We knew our new techniques were reliable and easy to do. We knew customers liked HEP and were willing to buy it. We knew that our regular marketing organization could handle the program. As a matter of fact, one qualified man can do the entire job from start to finish. We knew that customers' heating habits vary, and we should watch what we promise them. And we knew that improved efficiency would combat the trend to gas. We also felt that the new business created by the program would offset the volume lost. But of more importance to us is the very great impact of good will expressed by all the people approached by the program.

We have gone one step further before bringing this program to the attention of the industry. Our direct marketing operations and our branded resellers were given complete training and have been putting the program to practical use. This has been, perhaps, a more rugged test to prove the soundness of our methods and formulas. The results have been satisfactory and have fully confirmed the Newark test.

We know of many instances where the customer was definitely considering gas when we approached him with our Heating Efficiency Program.

The installation of oilburners, and the maintenance of their efficiencies at a high level—like new combustion chambers or new controls—are basically service department functions and should be approached from that point of view. Burner service departments will, therefore, take on a new importance in oil heat marketing. They will no longer be considered a necessary evil, but rather a strong and vital part of the marketing program.

This will require a more careful selection and training of service personnel and, above all, a full realization of the new role that they must play in the sale of heating oil and replacement burners.

Our reaction surveys indicate that although customers may be dissatisfied, they do not often go out of their way to complain. This program allows us to determine if a customer's heating plant is performing satisfactorily. If it is not, it provides the machinery for us to determine what is satisfactory, what the savings to the customer will be, and what must be done to accomplish it. The cost of the work can be passed on to the customer and justified on the basis of the resulting fuel savings. The net result is a satisfied customer plus a reduction in our over-all cost of service because the burner will be in first-class shape when we are through. In other words, we are now delivering what we sell.

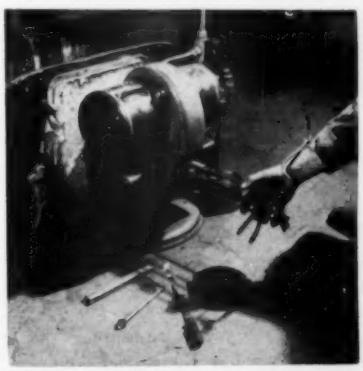
Furthermore, there is no longer any justifiable reason for an inefficient residential oilfired heating plant resulting from worn-out equipment. Since the savings to the customer and the cost of attaining them can be accurately predicted, the problem of getting much of the old, obsolete equipment out of the field has been solved. We can now pinpoint the need and the justification for a replacement burner easily and beyond question.

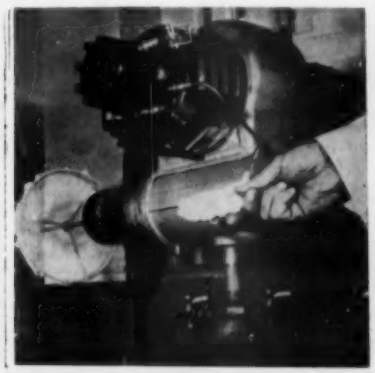
We found that many homeowners could see that their problems centered on their equipment, resulting in the replacement of oilburners or boilers in 30% of the modifications on a company wide basis.

We think that programs such as this are vitally important, not only to us, but to the entire industry. We therefore want to make our efficiency improvement techniques available to all interested oil heat marketers.

The best approach seemed to be through your local oil heat associations. With this in mind we are preparing a slide film presentation which describes the whole program and how it works and which will be available by May 1st in Esso Standard's marketing area.

We will supply the film and a speaker to launch the program. Our engineering manual will also be made available at a nominal cost. It contains all the mathematical formulas and computations and is simple for anyone to follow. However, if further help is needed, we will be happy to supply it.





In making a survey of a customer's oilburner it is simple to check nozzle size without taking the burner apart completely. If the customer buys HEP modification, however, the whole unit is dismantled. One of the important tests in the process is shown at the right. It determines the exact spray pattern for the burner, utilizing cheesecloth on the "embroidery frame" shown, which is saturated with copper sulphate solution. The serviceman holds cotton waste saturated with concentrated ammonia near the air intake. As the nozzle sprays the ammonia onto the cheesecloth, the spray pattern is seen as a deep blue stain.

How to end loss-of-prime Trouble

Cause of Trouble usually is Air entering suction Line when burner is idle

by W. B. Adams

AIR ENTERING an oilburner suction line was an everyday problem and a great trouble, back in the late 1920's and the early 1930's, when oilburners first were being installed in this country in considerable numbers.

Outside, buried, fueloil storage tanks were the fashion then. For many oilburner dealers, the practice was to install 1,000 or 1,500 gallon tanks for homes of usual size being converted to oil. These homes were large, compared to typical homes of today. The first homeowners advancing from coal heat to oil heat lived in fashionable neighborhoods, were monied, and occupied homes more-or-less pretentious.

In the early 1930's, one burner dealer relates today, he felt shamefully guilty of skimping when, outside a residence, he buried a tank of only 550-gallon size. When 275-gallon, inside tanks first made their appearance in his locality, he felt the bottom had dropped out of the oilburner industry.

The suction lines of these early oilburner installations, equipped with outside, buried tanks, were of steel pipe and had screwed connections; ¾" size suction and return lines were standard for many dealers.

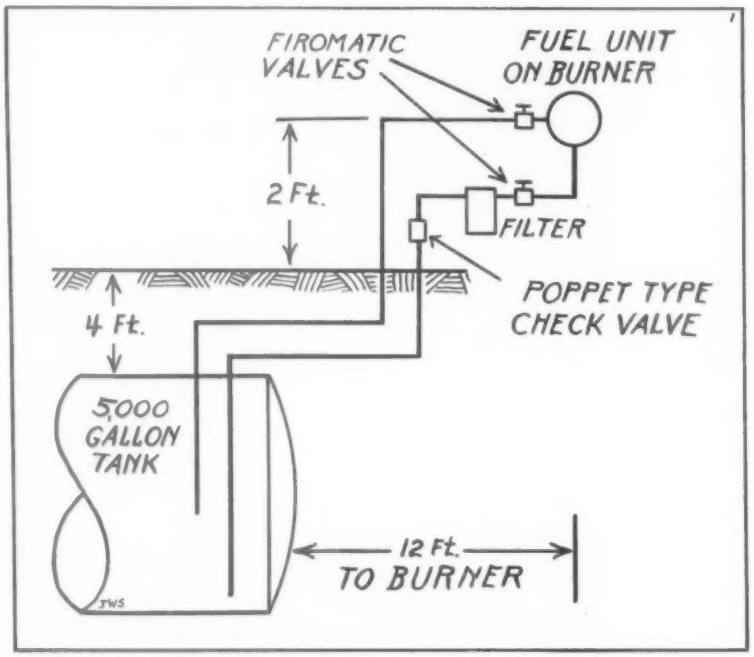
The big problem was avoiding leaks in the screwed joints of a suction line.

Two-stage fuel units for pressure burners, capable of coping with considerable suction-line air, were not yet in production.

On these early installations having buried, outside oil tanks, at least the high-up parts of the suction lines were under vacuum when the burners were idle. The entire lengths of the suction lines were under vacuum with the burners running.

Air entering suction-line leaks, tugged into a suction line by its vacuum, gave two kinds of trouble.

First, enough air entered a suction line while the burner was idle for hours, to cause air-binding of the burner's oil pump the next time the burner motor started. Sometimes only enough air entered a suction line, with the burner idle, to make the operation of the burner's oil pump noisy and erratic during a start-up—but after a short time, the burner and pump operation became normal and quiet.



Diag. 1—This system of oil piping for a pressure burner can work well. It demonstrated that it can, by working satisfactorily for three years. Then it developed loss-of-prime trouble. This occurred only when the tank was less than half full of oil. For such an installation to hold its prime for prolonged periods and with little oil in the storage tank, the suction-line check-valve must close dead-tight with the burner idle. The suction line, and all parts and specialties in it, right up to the fuel unit, must be absolutely free of air leaks. With everything else perfect, selection of the best check valve for the installation may be the prime problem. If a spring-loaded check-valve is considered, it should be tested to make certain that it does not penalize the pump because an additional vacuum of 2" to 5" is required to overcome its spring action and open it.

The second kind of trouble came from a suction-line leak which was subjected to a vacuum only when the burner motor was running. Such a leak fed air into the suction line only with the burner running; it did not cause loss-of-prime trouble following starting of the burner after a prolonged idle period. It did cause the burner's pump to make intermittent noises, often highly objectionable, all the while the pump ran. These noises varied from loud whining sounds, developing every few minutes and weird enough to cause timid occupants to wonder if ghosts had taken up lodging in the basement, to the rackets of wild and berserk buzz saws.

When suction lines having screwed joints for their steel piping were used along with only the early single-stage oil pumps, the hazards of suction-line leaks were great.

They were so great that one manufacturer of pressure burners gave this advice to dealers: Before putting oil in a new suction line, test it with high air pressure. Just before leaving the job at the end of a working day, pump up 100 lbs. air pressure in the

suction line with its two ends capped, and with a pressure gage connected to the line reporting the pressure. If the pressure has dropped to less than 90 lbs. the next morning, when you arrive on the job, consider that the suction line has air leaks, which will cause unsatisfactory burner operation. Locate and seal the leaks. Test with 100 lbs. air pressure again, to determine if the suction line is air-tight and ready to use.

Today, oilburner installers and servicemen face fewer problems involving suction-line trouble than they did years ago . . . on house-heating installations. That's because inside, 275-gallon tanks are used widely in homes.

On outside-tank installations, today's fashion is to use copper tubing mostly for the light fueloils which need no heating. Such tubing provides relative freedom from chances of suction-line air leaks.

The use of two-stage fuel units for pressure burners now ends many problems in which are involved suction-line air leaks, and high oil lifts from the oil stored in tanks to burners.

Yet, today certain dealers still face and must solve difficult problems related to suction-line air and oil-pump loss of prime.

Indicative of this, within one week two letters arrived at the Readers' Problems department of FUELOIL & OIL HEAT, about such problems.

The first letter described an existing installation having a pressure burner properly connected to an outside oil tank by a suction line and a return line. The burner fires a heating boiler.

Recently a new water heater, also fired by a pressure burner, was installed in the boiler room.

A pipe tee was installed in the original suction line, close to the original burner. From this suction-line tee, a line was run to the suction-line connection of the fuel unit on the new burner, firing the new water heater.

Similarly, the return-line from the new burner was connected to a pipe tee installed in the return line of the original burner.

Now, both burners use the same suction line, and both use the same return line. When running, either or both burners draw in fueloil from the original, suction line, which is buried outdoors, and which extends out to the buried, outside oil tank.

"In other words," this letter from the reader emphasizes, "the two oil pumps use one suction line."

The letter goes on, "Complaint is that when the second burner comes on there is set up a humming noise in the oil pumps. This noise stops in less than a minute.

"How should this have been connected originally for a good job? What can I do now to correct?"

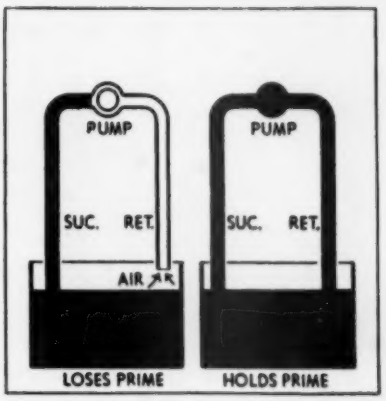
The installer of the oilfired water heater had luck. At least, both the oilburners run properly, except for the humming sound that lasts for less than a minute after starting of the burner firing the water heater. That's not bad trouble—compared, for example, to oilburner breakdowns, which could be the result of installing the piping of the new burner in this fashion.

Before doing anything else, the inquirer should inspect the fuel units on the two burners. Both should be two-stage type. If they aren't, switching to this type might end the trouble.

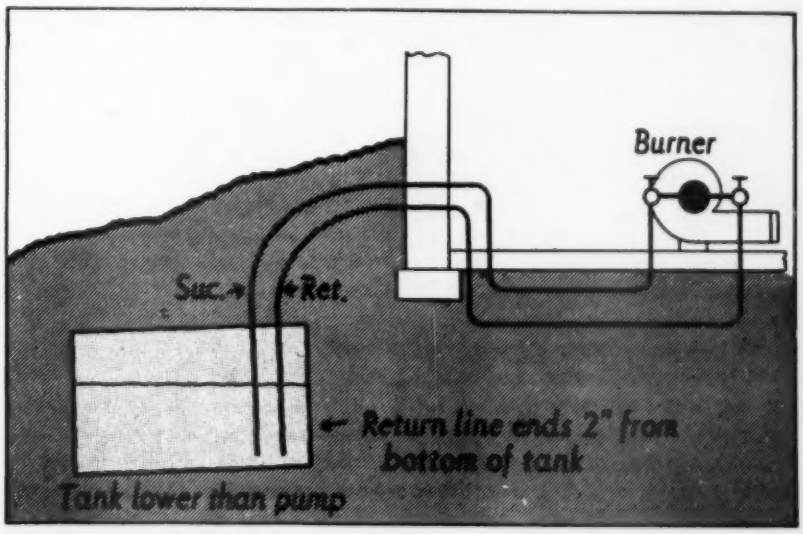
Consider using either of two classic remedies for such trouble, used for years to avoid it or end it.

Either install an additional suction line for the new burner, serving only this burner, and extending from the burner to the bottom of the oil tank (so that each burner has its own, individual, independent, suction line). Or install an automatic, wall pump to feed both burners fueloil by gravity.

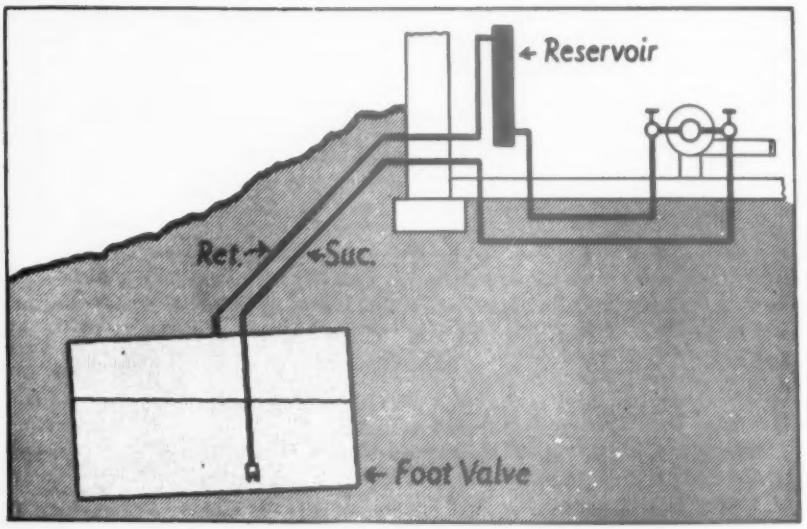
It's logical to find out which of these two arrangements is less expensive for



Principle of helping prime-holding by running the return line down to within a few inches of the bottom of an outside tank. The path through which the oil is pumped includes the fuel unit, the suction line, and the return line. It is the equivalent of the inverted U shown in these drawings. Operation of the oil pump should fill the inverted U completely with fueloil; the piping should be designed for this. No air should be pocketed in the oil piping. With the return line extending down into the fueloil in the storage tank, air cannot get into the open end of the return line.



Extending the return line to nearly the bottom of the tank, like the suction line, helps hold prime. It also permits interchanging the lines either for testing or permanently, if the original suction line seems to have developed a slight leak. The use of this arrangement makes tight-closing of a suction-line check-valve less important than it is with the return line connected to the top of the tank.



Actual, on-the-job arrangement of a return-line reservoir, installed to provide make-up oil for a leaky check valve located either at the bottom of an oil tank (a foot valve) or at the burner, as in Diag. 1. More burner installers seem opposed to the use of foot valves than in favor of using them. Greatest objection to them is that they are inaccessible, as usually installed. Also, they may be in sludge sediment, if these things accumulate in a tank.

the particular installation.

There is still one more way to solve such a problem, a way new in recent years. It consists of installing a fuel-transfer unit, simply an oil pump driven by its own motor. Arrange the oil piping so that when this fuel-transfer pump is running, it provides fuel-oil under a small head-pressure for the intake connections of both oilburners. Wire the fuel-transfer pump to run when either oilburner motor is running.

Obtain full details of the needed oil piping, and the needed electrical wiring and controls, from the manufacturer of the fuel-transfer pump.

Fuel-transfer pumps are good things to know about. They are excellent, for example, for solving problems of providing fueloil for horizontal furnaces located high above fueloil storage tanks.

The second letter, which recently came to our readers' problems department, and which deals with air-in-suction-line trouble, has this to say: (See Diag. 1.)

"Please see attached sketch of piping for a burner which, after three years of satisfactory operation, suddenly developed lock-out trouble caused by loss of prime.

"Suspecting trouble in the oil lines, we ran new, temporary lines, ½" nominal size, to the oil tank—with no better results. We tried another two-stage pump. We tried different types of check valves.

"The problem seems to boil down to the fact that when the oil level in the tank is low, the pump pulls a vacuum of 15" to 16". On pump shut-down with this high vacuum, the poppet-type check-valve definitely holds open; at the same time, oil drains out of the suction line, back into the tank!

"This occurrence seems impossible, but it does take place.

"We know that excessive vacuum conditions are naturally to be avoided, but we thought this is only to reduce the load on the pump, and has no bearing on loss of prime. Some manufacturers speak of using a booster pump when vacuum would exceed 15"; a type of pump with a vacuum breaker is also mentioned.

"Yet if such special devices should be used here, how do we explain the long period of successful operation without them? Possibly a restriction may have developed in the suction line to cause higher vacuum than before; but if so, the trial use of the new oil lines would have corrected this. We have no record of original or earlier vacuum readings, as the burner was installed by others. But we assume that they were not as high.

"Our inquiry to the pump manufacturer produced no real answers to any of these questions. At present the unit is operating satisfactorily, as the tank has just been filled, but we expect to experience the same loss of prime when the oil level drops appreciably.

"We have not felt that we could even bill our customer for services rendered, since we have not solved the problem for him.

"Any suggestions, comments, or information you might be able to offer us would be appreciated."

At the bottom of the inquirer's drawing, which accompanies this article and here is labelled Diag. 1, are notes giving additional information.

The pressure burner has a two-stage fuel unit, these notes indicate, and fires at the rate of 10 gph.

"Pump tests OK at 140 lbs."

Suction and return lines are copper tubing, ½" nominal size.

The notes are exceptionally complete in reporting that with the level of oil in the tank 9 ft. below the pump, the vacuum is 15" to 16" with the burner running. The vacuum remains at 12" to 14" for long periods after the burner stops, the notes say, but the suction line loses its fueloil.

However, with the oil storage tank full, and the level of oil in it only 6 ft. below the burner, the suction line remains full of fueloil during shut-downs; the vacuum with the pump running then is 8" to 9".

These notes wind up sadly, "Burner periodically is locked out by its electronic primary control (12 second safety timing) when level of oil in tank is low, because suction line becomes empty of fueloil during oilburner 'off' periods."

The sentences in the inquirer's letter prove that he has done some clear thinking about this problem.

He says, for example, that following a pump shut-down with the suction-line vacuum as high as 15" to 16" (level of oil in the storage tank is low; say the tank is less than half full), the poppet-tight check-valve in the suction line, near the burner, definitely holds open. At the same time,

oil drains out of the suction line, back to the tank.

Just substitute the thought that the check valve fails to close dead-tight (instead of saying it holds open), and anyone can go along with what the inquirer says.

He says the occurrence he describes seems impossible, but does take place.

No, we can't agree with that. It does take place, all right, but it does not seem impossible.

Study Diag. 1. With the burner idle, suppose the poppet-type check-valve in the suction line, near the burner, fails to close dead-tight. Fuel-oil trickles backwards, downwards, through the check valve. Oil that was in the suction line winds up in the oil tank.

The more leaky the check valve, the faster this happens. When the equipment first was installed, the check valve originally installed may have closed dead-tight for all practical purposes . . . or more-or-less tight, just tight enough to prevent loss-of-prime trouble at the end of usual oilburner "off" periods.

One thing that could have caused the trouble to start, after three years of satisfactory burner operation, is deterioration of the tight-close (or nearly tight-close) ability of the check valve installed originally.

That brings up the question of how tight you can expect different check valves to close. The replacement check valves, tried without success after the trouble started, simply may not have been as tight-closing, or nearly tight-closing, as the original check valve.

Discussing the topic of how tight different check valves close, some engineers declare that a check valve that seats on a metal-to-metal basis cannot possibly close dead-tight when used in an oilburner suction line.

These engineers point out that if you connect such a metal-to-metal check-valve to a tank, for example, and then create a high vacuum of say 20" in the tank, within a few hours, at most, the check valve will leak backwards enough to kill the vacuum in the tank.

A check valve that really can close dead-tight (not a metal-to-metal check-valve) has been demonstrated by being stuck by vacuum to a man's tongue. After sucking on the check valve has produced something of a vacuum in it, this check valve is applied properly to the tongue, for this demonstration. It stays there indefinitely, because it closes dead-tight. The engineers who declare a metal-to-metal check-valve cannot close dead-tight point out that no metal-to-metal check-valve can be demonstrated by this tongue-holding technique.

The check valve that was demonstrated this way at an oilheating show is the Hold-Tite. It has a steel ball which seats, really dead-tight, on an O-ring made of synthetic rubber.

In connection with the equipment in Diag. 1, these engineers would declare, the use of a check valve to end the trouble has not been given a fair trial, if only metal-to-metal check valves have been tried as remedies. The set-up in Diag. 1 needs a check valve which closes dead-tight with the burner idle.

With the check valve leaking while the burner is idle, in Diag. 1, of course the leaking is greater with a higher vacuum pulling the oil down through the check valve. With the level of oil low in the oil storage tank, the vacuum on the check valve is greater (with the burner idle) than with the tank nearly full. During an oilburner "off" period, leaking of the check valve will empty the suction line of fueloil faster with little oil in the tank, than with much oil in the tank.

As the check valve in the drawing leaks while the burner is idle, fueloil escapes from the suction line, and flows down to the oil tank. Air must enter the suction line to replace the escaping fueloil. If the end of the return line is not beneath fueloil in the tank, air can enter the return line . . . flow through it and ultimately reach the suction line.

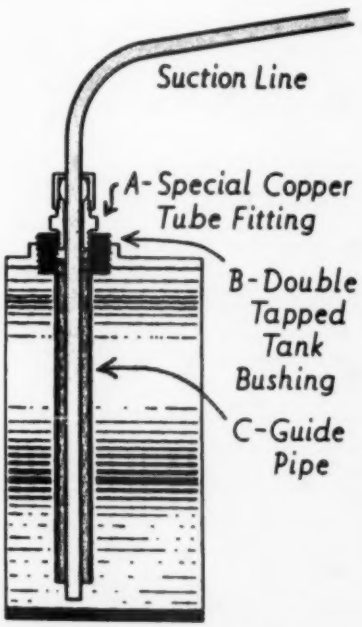
Air leaks in any of several parts of the oil-piping system can permit air to flow ultimately to the suction line, to replace fueloil escaping to the tank through a leaky check valve.

The drawing shows one shut-off valve in the suction line, and another in the return line. If one of these valves developed an air leak in its packing glands, after the burner had been in use three years, that could have started the loss-of-prime trouble. Any air leak in the oil piping or specialties near the burner, or in the boiler room, could do the same thing.

Having all of these things absolutely air-tight helps greatly. This is of great importance, even if a check-valve supposed to close dead-tight is used. After all, even such a check valve may not close absolutely dead-tight every time the burner stops. If occasionally it fails to, no air should leak into the oil piping system through the glands of the burner's shut-off valves, or through other oil-handling parts above the check valve.

As the inquirer prepared it, Diagram 1 clearly shows the return line extending two-thirds the way to the bottom of the oil storage tank. All the way down, like the suction line, would be much better. As an accompanying drawing shows, extending the return line to the bottom of the tank helps hold prime during an off period.

Another accompanying drawing shows the principle of installing a reservoir in a return line to improve the hold-prime ability of an unusual or troublesome installation.



Avoid connections in suction lines, outside the boiler or furnace room! Use this or a similar arrangement to have the suction line extend down through the top of the tank, without connections at the tank top.

Business follows Service

Cramer's oilburner service Work led to the "natural Step" into Fueloil

by William J. Stein

"I JUST CAN'T SEE how an oil man can stay out of the service end of this business." This was the first remark made by Bob Cramer of New Brunswick, N. J. Although a man can be a heating and oilburner service contractor; yet, the fueloil business is so natural a supplement for the service and installation work that it was too good to be overlooked. Thus in 1954 Cramer took the "natural step."

In 1926 when this business was first started by Fred Cramer, the uncle of the present owners, the prime interest was in heating and oilburner installations. Then Fred Cramer accepted the service work of his own customers and that of other fueloil dealers. The business grew in a rather interesting way. His work was confined, not only to the regular home conversion jobs, but also to the larger structures in the community.

By concentration on the mechanical end of the business he established a reputation for efficient oilburner work. Thus his installation and service crews came into such places as the city hall, fire and police departments, local office buildings, as well as, the average home. "Certainly, the men who service the fire department are good enough to service my home burner," is the repeated statement of domestic users of Cramer's service contract.

Cramer's spreading reputation for superior personal service is the main source for the increase in business. Referrals by present customers is the thread by which this business is being channeled to new accounts.

For the past number of years this business has been operated by Joseph and Robert Cramer, who are the nephews of the original owner. These men have stressed the element of personal service over a 24-hour period, for seven days a week, thus assuring no dissatisfied customers. During the day there are three servicemen on constant call. Should all of these men be occupied, either Joe or Bob will make himself available to immediately fill in the overload. During the evenings and on Sundays three servicemen, Bob and Joe are available on a rotating schedule.

To assure prompt service and reduce long runs, all service and oil trucks have two-way radios. To guarantee prompt response to a night service call, the telephone answering service that receives the call after business hours contacts the servicemen on duty at that time by phone. If these men cannot be reached by telephone, the call is relayed to a central radio station in New Brunswick which, in turn, broadcasts the call over the two-way radio.

Close Communication

Thus, communication with the servicemen are assured at all hours of the night without disturbing a customer by ringing his telephone at an unusual hour. The Cramer brothers are very proud of their record of being able to have a serviceman at the customer's home within a half hour after a call.

Cramer Fuel Oil Company offers two basic service contracts. Plan A is a "Pre-season burner Conditioning" and costs $12.50. This includes a vacuum cleaning of the heating plant, a cleaning of the oilburner, filters, lines and nozzle. It also includes lubrication of motors and all adjustments of the electrical and mechanical equipment.

Plan B costs $20. This includes the "Pre-season burner Conditioning" together with any additional service calls, free of charge, for the remainder of the heating season. In all cases the cost of replacement parts are added to the price of the service. For persons not covered by plan B the minimum service charge is $4 per call.

The service department is completely integrated with the installation work. The same men work on new work and also do some airconditioning installations. Because of the modest size of this organization all the employees with the two principals pitch into any phase of the work itself; therefore, the drivers and the servicemen are able to have year-round employment. It has been Cramer's aim to be able to promptly take care of every service call from their own stock shelf. Their reputation for being able to immediately restore a heating system, in any emergencies, even fires, is recognized by the vast majority of their customers.

An attractively-displayed window type airconditioner in Cramer's showroom has been the source of 15 units sold and installed at a profit. An additional number of commercial installations are made annually. Although this work is highly competitive, and they do not openly solicit it, they find that requests for airconditioning work comes from their regular oil and service accounts. Customers coming into the office to pay their monthly oil bill cannot help but see this equipment displayed. Many of these customers recognize the importance of buying mechanical appliances from a firm that is personally responsible for properly servicing the equipment it sells. Hence, added sales in cooling as well as heating equipment is obtained.

Bob (left) and Joe Cramer seated at a desk in the Cramer Fuel Oil Co. office.

Bob and Joe Cramer personally take care of the overload on burner service work. Here the two of them are shown after inspecting some of the oilburning equipment in the dormitory buildings of Rutgers University at New Brunswick, N. J.

Getting into fueloil in 1954 was just "natural" for the Cramer brothers. The purchase of a fuel truck together with a short period of solicitation of their own installation and service accounts got them started. This segment of the business grew slowly within the confines of their regular service accounts. At the end of the 1959 heating season they had 600 oil accounts and distributed about a million gallons of fueloil. They managed this easily with their two oil trucks and a 40,000 gallon bulk storage plant.

Joe commented that he thought they were at an advantage by comparison with other dealers. "The oil business," he stated, "was the easy part. Making deliveries efficiently was not too difficult. The service and the equipment end was the tough part of the business." He reasoned, "Whereas, the oil customer provided a repeat business, the equipment sales and service was more or less of a contracting type business. Every little job required some personal attention. Figuring and estimating had to be accurate in terms of labor as well as materials. Time delays on the job can be costly to the point of losing money."

For this reason the Cramer brothers emphasized the importance of the owner knowing the mechanical end of this work by himself. The training and knowledge of the service crew is also of prime importance. A man who can quickly detect the cause of a failure and remedy it without delay is the only base upon which a profitable service department can work. It takes an expert to keep a satisfied customer, and, at the same time, work at a rate that will show a profit for the firm.

Added to the service work the Cramers have been doing about 40 to 50 new burner installations a year. These represent mostly replacements and a few conversions. In 1959 they also installed a number of new complete oilheating jobs.

The company is a Solar Heat dealer and Bob and Joe Cramer added a good word for Gulf Oil. Its cooperative advertising program has been helpful with local newspaper, radio and mail campaigns. Gulf's policy of periodically painting Cramer's trucks provides attractive advertising for both the company and its supplier.

One thing that Bob emphasized was the fine quality of the "hydrogen purified" oil. During the heating season Bob noted a marked drop in the number of service calls. During subsequent summer clean-ups it was noted that the filters and nozzles were considerably cleaner than after previous seasons. Bob indicated that in many instances the equipment was as clean at the end of the year as it was at the beginning. This was a big help with Cramer's Plan B accounts. It also made for more satisfied customers.

Cramer has about 1,200 service accounts within a 15 mile radius of its office. Some of these will remain only as service accounts because they use industrial grades of oil which Cramer does not supply. However, it is of little doubt that most of the remainder of these service customers who use No. 2 oil will eventually be purchasing this oil from Cramer.

Cramer's office is housed in an exceptionally clean and attractively furnished store not too far from the center of town. Both oilfired heating equipment and airconditioners are displayed. One of Cramer's service trucks is shown.

Throttle Control for oil Trucks

Harry Giffords demonstrates Control he made to speed and simplify delivering Oil

by John W. Schulz

NOT AN OIL COMPANY executive recently turned inventor, but an oil company executive who's been an inventor since his early teens . . . that's Harry Giffords, vice-president of Giffords Oil Company, Franklin Square, Long Island, N. Y. He applied for his first patent when he was 14 years old.

Well known because of his activities as chairman of the Technical Committee of OHI of Long Island, and because he is a member of several technical committees of the national OHI organization, Harry Giffords also is known to steady readers of FUELOIL & OIL HEAT. A feature article on some of his ideas and inventions appeared in the September, 1959 issue. The article gave details of how he uses a warm-air furnace to provide hot water on tap the year 'round, and how he uses one forced-air blower per zone to provide extraordinary performance from a zoned, forced-air heating system.

That article in last September's issue pointed out that Harry Giffords is a man of many, widely different interests, and that he works at all of these with peculiar intensiveness and great vigor.

He said much to prove all this, when recently I phoned him as the result of having heard rumors about a fueloil-truck throttle control he had been inventing and developing, affected by the rate-of-flow of the fueloil going through a truck's oil pump and meter.

He pointed out that he had seen several arrangements made to speed up a truck engine, and the fueloil pump it drives, when oil is being pumped off the truck and delivered into a customer's fueloil storage tank.

"Every arrangement of this kind that I've seen," Giffords said, "works according to the pressure the fueloil pump is developing. A drop in this pressure causes opening of the truck engine's throttle, and speeding up of the engine and the oil pump it's driving."

I asked what's wrong with that.

He answered that it's not good for a truck driver to have to drag a live hose from the truck, and take its nozzle to the customer's fill box . . . with the hose live all the time he's doing this.

A week later, when I visited Harry Giffords at his fueloil company's headquarters to get full details of his new idea, and pictures, he expanded on his objections to a driver's having to extend a live hose from a truck to a customer's fill box.

A "live" hose, it turned out, has considerable fueloil pressure in it, developed by a truck pump turning over at considerable speed . . . speed much higher than that provided by idling the truck engine.

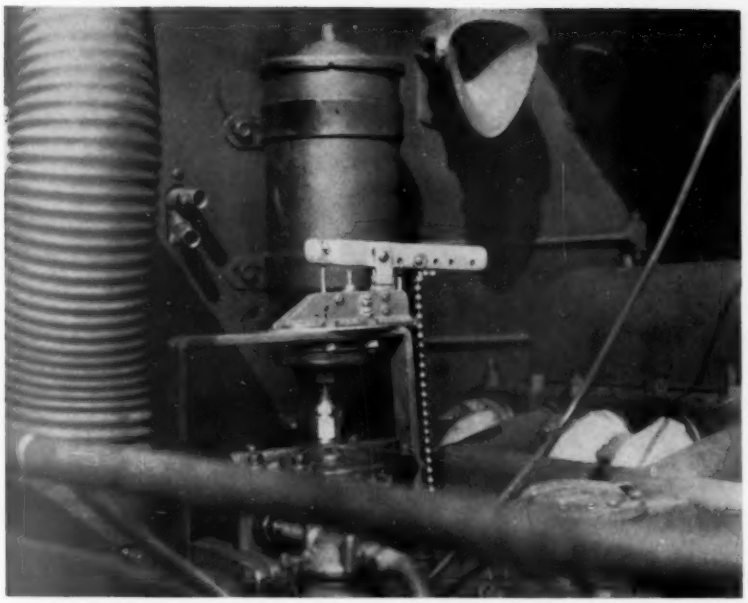
Without considerable oil pressure in it, the delivery hose of a fueloil truck is limp, affable, agreeable, so that it goes along easily with the driver as he tugs it by the hose-nozzle end.

"Live," under considerable pressure, a delivery hose is stiff and full of fight. It has much energy, tending to straighten it out; it wants to take the shape of a straight line. Bourdon-tube effect causes this, the same effect used in most pressure gages and vacuum gages.

Suppose a hose is somewhat flattened, so that its cross-sectional shape is elliptical. For its perimeter, it then has relatively little cross-sectional area. Put high oil pressure in the hose, and that tends to increase both its cross-sectional area and its volume . . . to make room for more oil being forced in by the high pressure. The hose wants to force itself into a shape of true, circular cross-section. This shape provides maximum cross-sectional area, and maximum volume in the hose, for the given perimeter of the hose.

But when it's of circular cross-section, the delivery hose has to lie in a straight line; it can't have curves in it. That's why a live hose fights with a driver trying to extend it from a truck.

Harry Giffords, right, shows early model of his fueloil-truck engine-control to John W. Schulz, technical editor of FUELOIL & OIL HEAT. Sucking on the bottom connection puts a vacuum on the diaphragm, causes the seesaw lever to tilt.



Diaphragm device, in actual use on an oil truck. When the truck is in position to deliver fueloil, the truck engine idles . . . except when this diaphragm device speeds up the engine and the truck pump because the hose nozzle is idle. Advantages include use of minimum gasoline and engine oil for pumping fueloil; minimum truck-engine noise making deliveries; avoiding overheating of the truck engine when deliveries are made during hot weather; and avoiding wear-and-tear on delivery hoses, and truck operators, caused by handling of "live" delivery hoses.

When I first arrived at his office, Harry Giffords showed me his new device for oil trucks. It plainly included a flexible diaphram of about four-inch diameter, arranged to move a center-pivotted lever in a seesaw fashion. (See the accompanying photographs.) Affected either by slight pressure or slight vacuum, the center of the flexible diaphragm would move considerably; so would the seesaw lever the diaphragm was connected to by a metal link.

Giffords had on hand one of his fueloil trucks, which was equipped to use his new idea . . . one version of it, at least, for the new idea can be applied in any of many ways.

He explained that on this truck he was using one more device, in addition to the assembly that included the flexible diaphragm. He could use any venturi-principle device, in the intake pipe of the truck's fueloil pump, which would cause a vacuum to be exerted on the flexible diaphragm as the result of fueloil starting to flow into the truck's oil pump.

Actually he was using, as an accompanying photograph shows, a Bell & Gossett, return, Monoflo fitting.

As the photograph shows, at the side connection of the Monoflo fitting (which in the photograph actually is above the fitting) is a pipe elbow and a shut-off valve. From the valve, installed to be closed if equipment to the right of it in the photograph should need servicing, a ⅜" copper tube line runs to the chamber below the diaphragm of the level control.

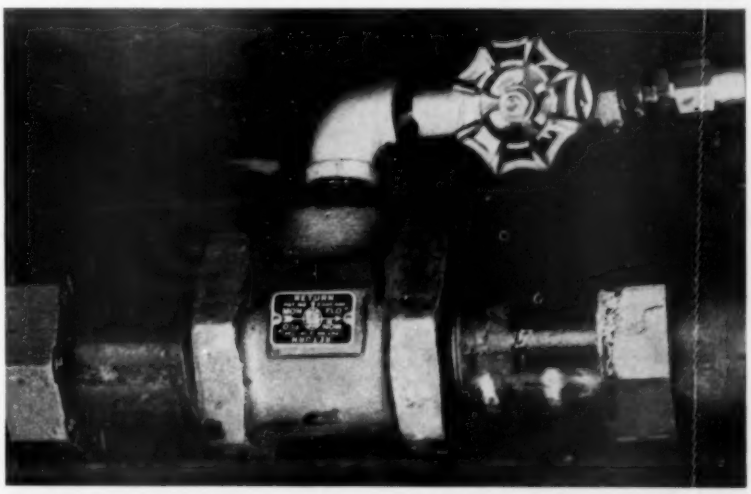
From the seesaw lever, a chain extends down to the throttle of the truck's carburetor. When the seesaw lever tilts because a vacuum is applied to the diaphragm, the movement of the lever and the chain open the carburetor throttle . . . to a suitable, maximum amount, because a set-screw having a lock-nut has been adjusted to limit the movement of the seesaw lever. Movement of the lever cannot open the engine throttle excessively, thanks to proper use of the adjustable set-screw.

The operation of this control set-up is exceedingly simple. The Monoflo fitting, in the inlet pipe of the truck's oil pump, develops a vacuum in its side outlet only when there's a flow of fueloil, a movement of fueloil, through the pump-inlet pipe and into the oil pump.

When the Monoflo fitting develops a vacuum, the diaphragm device at the carburetor is affected by the vacuum, and it acts to speed up the truck engine (and the oil pump being driven by the engine) a suitable amount.

To make an oil delivery, the operator of the truck starts his truck fueloil pump, leaves the truck engine idling, and then starts walking from the truck to the customer's fill box, drawing the delivery hose along with him. The hose is not "live." There's little pressure in it, because the truck engine is idling and the fueloil pump therefore is turning over slowly. Not

(*Please turn to page 126*)



This Monoflo return fitting, installed in the inlet pipe of the truck's fueloil pump, is the only other component of the system, in addition to the diaphragm device.

Customers are warm Friends

Johnson Fuel Oil, Orlando, emphasizes customer Services, adjusted to Florida Weather

"ALL OUR CUSTOMERS are warm friends," the registered trademark slogan of the L. A. Johnson Fuel Oil Company of Orlando, Florida, is a thumbnail description of the business personality of one of the South's largest home suppliers of fueloil.

The slogan, first used by Johnson in an interview with a newspaperman during the Florida fueloil shortage early in 1947, became the company trade-mark during the following months. Wartime rations left Florida at the bottom of the priority list for heating fuels, and when controls were lifted suppliers sent their meager stocks to the colder North.

"We learned a lot of things during those bleak days when people stood in line in near freezing weather waiting for us to fill cans, bottles, and jugs, just to give them enough kerosene for a few hours of heat.

"We learned that the fueloil business is more closely related to public service than any other utility. We learned the high value the public places on integrity and the satisfaction that comes with being able to operate efficiently in an emergency," Johnson stated.

Johnson and his organization have had many opportunities to put these lessons into practice during the weather extremes that plague Florida fueloil dealers. Hurricanes and near-hurricane winds that toss empty 55 gallon drums around like ping pong balls are just one of Johnson's problems. Others include sudden cold snaps that record temperatures in the 80's one day and in the mid-30's the next morning.

Unlike his business counterparts in the North, Johnson has no contracts with his customers, conducts his business in such a way as to "earn the right to continue to serve them."

"Public confidence in us as a fuel-oil distributor—that's the single and most important ingredient in our business," Johnson said.

To plant that image of confidence firmly in the public's mind, Johnson plans a yearly budget in excess of $20,000 in advertising and public relations. His "One Word Weather Forecast" is a good example of a hard-hitting "soft sell" advertising campaign.

Johnson's theory is simple. When your wife calls you and asks what the weather is going to be, you don't give her the barometric readings complete with the variations in humidity between high and low ground locations. All you say is: It's going to be cold, or warm, or mild, or rainy. And that's how Johnson writes his commercials. Typical spot goes something like this:

"And here's a one-word weather forecast from the L. A. Johnson Fuel Oil Co. The weather is going to be: Mild.

"And here's a one-word reason for calling L. A. Johnson when you need fueloil: Safety. Johnson's drivers are trained to protect your flowers and shrubs, they have won safe driving awards that are the envy of every commercial driver in the city . . . etc."

It's a unique combination of soft and hard sell. Here again, Johnson finds that integrity pays off, for the announcer must give the accurate predictions, no matter what the effect is on the oil business. When it is to be warm or hot, they say so. The result is that people quote Johnson's one-word weather forecast when asked, as readily as they formerly gave the official prediction.

The company begins saturation radio campaigns of 60 spots a day on three stations on October 1, and buys a fourth station on a degree-day basis. If the weather drops to 55°, the fourth station puts on eight spots, increases the number with each two-degree drop in temperature down to 45°. The company has found that radio sells for them in Central Florida.

Johnson high-spots television because of cost, uses it only for special events and promotions. One such special event is the Santa Claus Parade, heralding St. Nick's official entry into Orlando. This event is covered by Johnson on radio and television. For the children who can't get to the parade because of illness, he has a special news picture taken of the event and sends prints to all children who write to the company.

Thousands of pictures, sent as a Christmas greeting from L. A. Johnson personally, end up on nursery walls, in scrap books, or wherever children keep their personal picture of Santa.

Johnson divorces his newspaper campaign from radio and TV, but employs the same combination of soft and hard sell in both morning, afternoon, and weekly newspapers.

Typical of the public relations pro-

"The thing that makes this business so great is the day-to-day challenge it represents and the prospects it holds for the future," says L. A. Johnson.

Reggie Moffat, general manager, serves as chairman, Florida's OHI committee and as president, Better Home Heat Council of Florida, which he and Johnson helped organize.

Ten incoming lines feed in a non-ending supply of orders during cold weather. Mrs. Florence DeMoll, standing, directs the operators who smile with their voices.

Sam Holloway, standing left, keeps up with latest time saving ideas in fueloil accounting. The company now has adopted cycle billing and postcard invoicing.

A "one bite" system allows anyone credit whose name is not reported to the local dealer association. Losses are far below half of 1% according to Mrs. Elwyn Gray.

gram is the "coldest day" contest between Johnson and "Cracker Jim," the local newspaper's almanac-quoting "cracker" weather forecaster. Johnson gives one cent a gallon to the "Cracker's" favorite charity for every gallon of fueloil sold on the day picked as the coldest of the year. The last three years have seen the weather prophet hit the mark for better than 70,000 gallons of oil and bonus payoffs in food for needy families, equipment for the local Exception Child Clinic, and shoes for needy children.

Of all public relations activities, Johnson considers the new homebuilder program the most important. His activities in this connection have won his representative, Reggie Moffat, a seat on the Board of the local NAHB affiliate, the Mid-Florida Association of Homebuilders.

"We began with the selfish idea that we could make love to the builder in his own backyard by joining his association and soon learned that the very future of his industry was directly connected with our own. Instead of making love to him, we pitched in to help him and ourselves, now we find we're as much interested in the price of mortgage money and Fanny Mae discounts as the homebuilder.

"There are probably a lot of under-the-table deals around for builders, but we don't have any, and the builders know it. We figure that the supplier who sits side by side with the builder and helps him work out his industry's problems is going to be around a lot longer than the fast buck boys. That's the way we're going to play it."

Johnson's business has shown a gain for oil heat each year since he bought the company in 1944. At that time, the operation boasted two war-weary 500 gallon tank trucks, one pick-up, and a dump truck for the delivery of soft coal (long since discontinued), and 400 accounts. Today's business is still conducted from the same building because of a mixture of sentiment and good judgment. It's an ideal location in the heart of the city's industrial section, and for the customers who come to the main office it has a "good homey feeling."

The two war-wearies have long since been replaced by 22 "rolling billboards" and the 400 original customers have been joined by over 18,000 new accounts.

To understand this operation, a fueloil dealer would find it helpful to forget all the lessons he learned in his previous business life. For example, Johnson's customers must call him when they want oil delivered.

Key to Johnson's business is the telephone operator. "We have only two in-person cracks at the customer. Once when they call us and once when we deliver the oil. Since we seldom see the customer when we deliver the oil, the most important spot is that 'voice with a smile,'" Johnson says.

To prove his point, Johnson's chief operator, Mrs. Florence DeMoll, revealed that in an average cold day the company will receive over 2,000 calls with most of them resulting in orders for delivery. To handle this volume, Mrs. DeMoll draws heavily on ex-

Johnson frequently checks terminal loadings, often dons company uniform and delivers oil. Driver Bill Hope, left, has been cited for safe driving and customers served.

As trucks pull into service area for re-loading they are turned over to maintenance people who correct any minor problems right on the spot.

Regardless of weather, trucks (22 rolling billboards) are washed at least twice a week, polished once every three months. This keeps a four-man crew busy.

Brothers Buddy (left) and Charles Wood, Jr., have been with the company since their high school days. Their dad is in charge of Johnson's terminal section.

telephone company employees who want part time work and who are used to working under pressure.

The system has worked so well that as high as 3100 orders have been written in one day, helped by the fact that the operators write each order directly on the meter delivery ticket, are not required to re-write each order. Color identification between kerosene and No. 2 fueloil keeps orders going to the right delivery section.

"Our training program is lifted right out of the Bell System, where all of us started," explains Mrs. DeMoll. "We work our new girls in pairs with experienced operators, and always have two reference operators for trouble shooting."

Delivery tickets are screened for credit only once. Johnson employs the "one bite" system, whereby everyone is given credit until they prove they are bad risks. The company exchanges credit information with other fueloil dealers in the area and refuses open credit to names on that list. So far, the policy has paid off, for Johnson has had losses far below one-half of 1% of sales.

Two brothers, Charles and Buddy Wood, who have been with Johnson since their early high school days, handle the routing and dispatching of trucks. They divide delivery tickets into seven sections, and within each section into the proper number of assigned trucks. The manipulating of trucks between sections to secure maximum use of equipment and personnel is the fine art these two practice with each cold snap.

Operating for only five months a year, with 80% of his business coming in three months, Johnson's biggest problem is personnel.

"There's no way in the world for us to keep 22 drivers on all year long, with nothing to do seven or eight months out of the year. We work a 'key man' system, keeping seven men and building a team around them as cold weather moves into the state," explained Charles Wood, Johnson's senior dispatcher.

Under the system, each of the seven "key men" is assigned a section of the city as his primary service area, although each is required to be familiar with other areas as well. Each man is assigned two or more tank wagon trucks and is responsible for the individual training of the drivers who work with him. The "key man" is paid a basic salary year-round, and an ascending commission scale that increases as the man reaches 100,000, 200,000, and 300,000 gallons. In addition, the "key man" receives one-tenth of a cent per gallon for all oil delivered by the men assigned to him for training. Assigned drivers are paid an hourly rate, and ½¢ per gallon commission.

Effective use of personnel has paid off, since even in the coldest weather the average drop seldom exceeds 35 gallons, and the organization boasts an average tank-wagon delivery of 5,000 gallons per day in cold weather.

Johnson drivers are required to attend school 10 days before being assigned a truck or a section of the city.

(Please turn to page 120)

1959 Installations were 635,951

EACH YEAR we bridge the gap between our January and April issues with some apprehension about how the final installation figures are going to show up as compared with our preliminary estimates in the January number.

This year we did much better than usual arriving now at a total for the year of 635,951, which is very little changed from the January preliminary figure of 637,057.

Factory shipments during the year as reported by the census bureau and adjusted for non-reporting companies were 644,974. Of these, 25,994 were shipped out of the country so there were 618,980 shipped for installation here. Then dealer stocks ended the year approximately 16,971 lower than the previous year so this is added to factory shipments to arrive at the installation figure.

No recognition is given to stocks that may have been shipped to a burner manufacturer, a boiler or furnace manufacturer or may be in the warehouse of a jobber. Naturally, these will even out over a period of time.

We have access only to factory and dealer records, and on these we base the installation figures.

All three general types of installations showed improvement from 1959. New homes were up 14%; replacement sales were up 18%; conversions from other fuels were up 5%. It is interesting to notice how these three classifications have become almost equal in volume of sales.

All types Improve

	INSTALLATIONS		
	New Homes	*Replacements*	*Conversions*
1955	376,199	119,983	313,123
1956	304,243	141,838	263,111
1957	224,445	151,256	204,746
1958	186,385	173,652	208,281
1959	212,407	204,776	218,768

Relative Importance of Areas

	1/1/57	1/1/58	1/1/59	1/1/60
New Eng.	16.7%	16.7%	16.8%	17.0%
Mid-Atl.	39.5	39.4	39.1	39.0
So. Atl.	5.9	6.0	6.2	6.4
Midwest	27.7	27.8	27.9	27.7
So. Cent.	1.3	1.3	1.3	1.3
Mountain	1.2	1.2	1.2	1.2
Pac. N W	7.7	7.6	7.5	7.4

Losses to other fuels of 109,262 were somewhat higher than the 98,023 of the previous year. On the other hand, it should be noted our conversion sales all represented accounts that we took away from other fuels, more than double the number.

With more than 9.6 million burners in operation, the relative importance of the different sections changes very little from year to year.

Distillate oilburner Installations by States, 1959

	Burners in Use 1/1/59	INSTALLATIONS *New Homes*	*Replacements*	*Conversions*	*Total*	*Lost to Other Fuels*	*Burners in Use 1/1/60*
Maine	115,247	1,146	4,661	7,494	13,301	532	123,355
New Hampshire	109,894	1,363	3,868	5,827	11,058	503	116,581
Vermont	31,709	594	1,538	2,355	4,487	144	34,514
Massachusetts	817,650	16,684	23,007	22,122	61,813	3,762	852,694
Rhode Island	117,444	2,131	4,016	5,712	11,859	547	124,740
Connecticut	370,227	13,033	12,495	8,218	33,746	1,705	389,773
NEW ENGLAND	1,562,171	34,951	49,585	51,728	136,264	7,193	1,641,657
New York	1,538,917	21,858	15,367	21,564	58,789	9,213	1,573,126
New Jersey	823,993	13,279	10,420	13,727	37,426	4,934	846,065
Pennsylvania	818,581	21,860	17,154	34,594	73,608	4,890	870,145
Delaware	64,076	1,252	983	1,296	3,531	393	66,231
Maryland	310,430	2,821	3,998	950	7,769	1,856	312,345
Dist. of Columbia	89,909	1,566	1,229	1,618	4,413	545	92,548
MID-ATLANTIC	3,645,906	62,636	49,151	73,749	185,536	21,831	3,760,460
Virginia	215,348	10,529	6,845	1,496	18,870	1,436	225,937
West Virginia	7,487	501	283	158	942	50	8,096
North Carolina	212,286	7,677	4,344	2,483	14,504	1,416	221,030
South Carolina	41,972	3,134	3,546	5,127	11,807	285	49,948
Georgia	27,618	1,661	940	321	2,922	181	29,419
Florida	71,924	7,834	1,773	472	10,079	481	79,749
SOUTH ATLANTIC	576,635	31,336	17,731	10,057	59,124	3,849	614,179
Michigan	488,691	9,637	10,982	11,505	32,124	12,067	497,766
Ohio	227,478	6,787	7,166	6,614	20,567	5,469	235,410
Indiana	210,233	6,464	7,367	7,715	21,546	5,091	219,321
Illinois	518,053	11,782	12,858	12,968	37,608	12,507	530,296
Wisconsin	334,575	8,345	8,371	7,768	24,484	7,856	342,832
Minnesota	323,623	6,346	7,233	7,575	21,154	7,793	329,751
Iowa	173,403	2,702	4,219	5,419	12,340	4,148	177,376
Missouri	142,452	3,291	3,750	3,928	10,969	3,457	146,214
Kansas	21,319	705	804	841	2,350	503	22,362
Nebraska	72,769	1,117	1,272	1,333	3,722	1,760	73,459
South Dakota	43,080	558	1,205	1,763	3,526	1,068	44,333
North Dakota	47,627	1,028	1,741	2,714	5,483	1,131	50,238
MIDWEST	2,603,303	58,762	66,968	70,143	195,873	62,850	2,669,358
Kentucky	20,937	1,013	573	325	1,911	239	22,036
Tennessee	24,931	1,089	615	347	2,051	285	26,082
Alabama	12,778	301	170	97	568	146	13,030
Mississippi	2,826	98	55	31	184	33	2,922
Arkansas	4,020	121	69	39	229	46	4,134
Louisiana	14,758	379	215	122	716	167	15,092
Oklahoma	4,328	133	75	43	251	50	4,454
Texas	40,633	776	441	250	1,467	465	41,194
SOUTH CENTRAL	125,211	3,910	2,213	1,254	7,377	1,431	128,944
Montana	11,969	410	368	78	856	178	12,279
Idaho	25,875	1,143	1,024	214	2,381	385	26,847
Wyoming	5,903	188	169	36	393	87	6,040
Colorado	16,388	519	465	98	1,082	246	16,759
Utah	19,573	997	893	186	2,076	292	20,464
Nevada	15,267	448	401	84	933	227	15,572
New Mexico	3,537	164	146	30	340	53	3,678
Arizona	16,120	318	285	60	663	239	16,259
MOUNTAIN STATES	114,632	4,187	3,751	786	8,724	1,707	117,898
Washington	296,043	9,225	9,457	7,796	26,478	4,420	308,644
Oregon	170,785	4,372	4,044	2,907	11,323	2,548	175,516
California	230,241	3,028	1,876	348	5,252	3,433	230,184
PACIFIC STATES	697,069	16,625	15,377	11,051	43,053	10,401	714,344
TOTAL U. S.	9,324,927	212,407	204,776	218,768	635,951	109,262	9,646,840

Watertown, N. Y.

OILHEATING MARKET REPORT

THIS TRI-COUNTY MARKET, Jefferson, Lewis and St. Lawrence Counties, though not including Franklin County, to the east, comprises most of the so-called "St. Lawrence Frontier"—an elongated area between the Adirondack State Park and the St. Lawrence River. The section, static in growth for several decades and underdeveloped, now looks to an expanding economic future, with the development of the St. Lawrence Seaway project and new hydroelectric power facilities at Massena.

Population, at 206,939 in 1950, had increased only to an estimated 226,000 by 1957, most of this in the Massena, project-construction center. But steady future increases, linked to the anticipated attraction of new industry to the region, are probable.

A special study, "The New St. Lawrence Frontier" (Suffrin and Palmer, Maxwell School Series, Syracuse University Press) treats, in detail, the economic profile of the area and the expected impact of the Seaway projects.

Papermaking, primary metal production and machinery manufacturing constitute the "Big Three" industries; the other remaining industrial employers here are numerous and scattered, but small in comparison.

This is a large land, long and narrow, with residential development dispersed. Agriculture (dairy farming) is substantial, but shows little growth. In 1959 there were an estimated 60,865 one- and two-family homes in the three counties. Today, this number has increased by approximately 10%, to some 65-66,000 dwellings, still predominantly one- and two-family units. Of these, approximately 62,000 are countable in terms of heating usage.

Home Heating Characteristics

On the basis of the federal census figures and estimates by local oilmen, we offer the following comparative figures for heating fuel usage, in central and non-central systems, for 1950 and 1958:

	Central Heating	
Fuel	*1950*	*1958*
Coal	21,415	12,090
Gas	175	2,015
Oil	8,000	24,180
Other	2,520	2,000
Total	32,110	40,285

	Non-Central Heating	
Fuel	*1950*	*1958*
Coal	7,080	6,035
Gas	35	50
Oil	9,480	11,110
Other	6,795	4,505
Total	23,390	21,700

Besides the 24,180 centrally-installed oilburners in homes, another 1,800 are indicated in use in small-commercial establishments and multi-unit dwellings, for a total of 25,980 in the area.

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Competitive Fuels and Costs

Coal, for househeating, ranges in price, from $25 to $32 per ton, which is the equivalent of 9.6¢ to 12.3¢ per therm.

The current price of No. 2 fueloil, owing to transportation differentials, ranges from 16.5¢ to 18¢ per gallon, or from 11.8¢ to 12.9¢ per therm.

Natural gas service was introduced in Watertown in 1954 by the Niagara-Mohawk Power Corporation and has been limited, to date, in its distribution, to that town. In Malone and Ogdensburg, the same utility furnishes propane-air gas service, with a 900 Btu heat content. This fuel, at 16¢ per hundred cubic feet (17.8¢ per therm) has no economic appeal for househeating.

The natural product, in Watertown, costs, at its lowest net rate bracket (after 28 therms usage) 9.5¢ per hundred cubic feet which is equivalent to its cost per therm. Thus it is extremely competitive, price-wise, with No. 2 fueloil—costs from 19% to 26% less.

With the projected growth of the region a controversy has developed between Niagara-Mohawk and the St. Lawrence Gas Company (a Canadian company) regarding franchises for distribution in the various communities. Each company is spending considerable sums in public statements of its position and to promote acceptance of its service over that of the other company. In such controversy, claims have, from both sides, been less than bashful as to the merits of the fuel, even though agreement between the companies has been infrequent on most other points.

Fueloil Distribution

Our estimate of the total volume of No. 2 fueloil marketed in this tri-county area comes to 48,306,000 gallons. Just under another 9,000,000 gallons of No. 1 or kerosene is sold for heating.

The integrated, or major, oil companies account for about 85% of the total volume brought into this market; independent wholesale suppliers furnish the balance.

The independent distributors do the bulk (88%) of the retail business, independent wholesalers, on a direct-to-consumer basis, another 10%, and the major companies a negligible balance of 2%.

Distribution and Marketing Characteristics

Various significant but ancillary marketing patterns are noted, in tabular outline:

PECENT OF:	
Dealers maintaining bulk storage	40%
Market gallonage handled by these companies ("yard buyers")	50%
Customers served through automatic deliveries	80%
Customers' inside tanks equipped with VENTALARM	75%
Customers who pay on budget plan arrangement	5%
Total oil heat installations in market made by: Fueloil companies	30%
Plumbing and Heating (non-fueloil) companies	70%
Fueloil companies also marketing gasoline	15%

WATERTOWN, N.Y.
(Jefferson, St. Lawrence, Lewis Counties)

Fueloil companies also selling coal	10%
Fueloil companies selling oilheating equipment	25%
Oilheated homes on service contracts	5%
Market's oilburners receiving annual clean-up (in addition to 5% above, under service contract)	40%
Dealer companies running own oil heat advertising (at average expenditure of $1.50 per fueloil account)	80%

Service contracts of the usual type are coming into fashion in the area, and the interest of dealers in assuming more of the service work responsibility seems to be increasing. The same holds true with regard to the sale of oilheating equipment by the fueloil distributors.

Market Concentration

A careful count of all oil marketers active in the three-county area indicates a total of 178 trucks to be in fueloil delivery operation. Among the 91 companies owning this number of vehicles, the average of trucks operated comes to just under two trucks per company.

There are two large companies, however, who operate through branches in principal areas; combining their branch operations, these two companies together have 41 vehicles in fueloil delivery service on the road. These two firms, plus six other companies with four or five trucks apiece, between them account for about half of all fueloil trucks in the area. The rest are owned by the small companies—one, two or three truck operators.

Industry Organization and Promotion

There has been little promotion by the industry, cooperatively, in behalf of oil heat. Now, with Niagara-Mohawk proposing extension of its natural gas service from Watertown to Massena and the St. Lawrence Gas Company disputing the right to serve these communities to the north, a furore over natural gas is being raised. Through the expenditure of considerable promotional funds by both companies, oil heat is being overshadowed in its position of public recognition and acceptance.

To combat this threat, an industry organization has been formed to be known as the "Modern Oil Heat Institute of Northern New York." Throughout the three counties an enthusiastic response to the new association has been secured from the fueloil distributors. They have contributed substantially to an industry promotional program.

The services of a professional advertising agency will counsel the group in its promotional planning and prepare its advertising.

Trends in Oil-Boilers and package Units

In the field of commercial-industrial, oilfired Boilers, chimney Draft loses to forced-draft and induced-draft

by Jean L. Dupuis

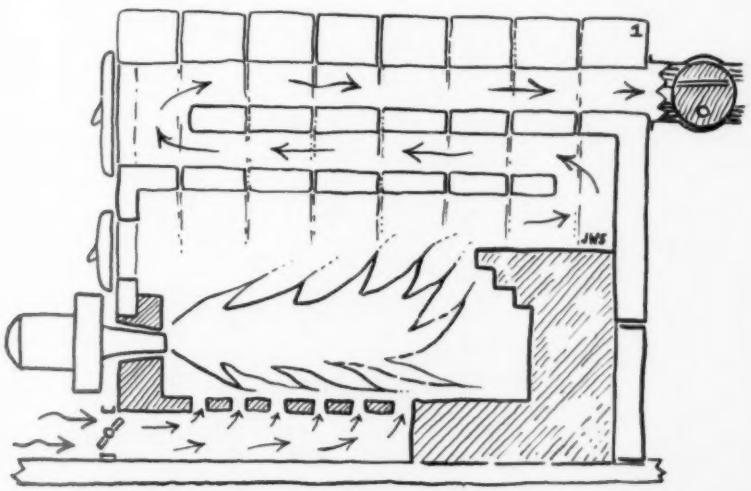
DESIGN-WISE and with respect to the principles used in them, commercial-industrial oil-boilers are coming of age. That includes modern boilers designed for oilfiring and fitted with oilburners only after being set in place on installations; some of these are shipped with burners intended especially for firing the boilers, while others are fitted on-the-job with any make and model of suitable oilburners.

That also includes package boilers, equipped at their manufacturers' factories with integral or nearly integral oilburners.

Coming of age for these boilers means that in overall their designers are using ideas and principles recognized as practical and effective, and modern, by many engineers in the boiler industry, and in the commercial-industrial oilburner industry.

By comparison, when automobiles came of age, the designers of different makes started agreeing in recognizing the value of certain principles; many of the same principles were used in automobiles of different makes. Gone were oddities, found earlier in particular makes of automobiles, including such things as transmissions mounted on rear axles, friction-drive transmissions, frames made of hard wood, and the odd and unique ignition system and magneto used for years in the Model T.

Also by comparison, when domestic oilburners came of age, the designers of many different makes started agreeing on the value of certain principles, which should be used —and weeding out and discarding ideas worthless or of little value, which should not be used. Gone were continuous gas pilots, safety devices of the drip-bucket type, and the principle of having some burners rely 100% on natural draft. Accepted in an industry-wide basis was the value of such things as jump-spark ignition



Diag. 1—This represents a well-known pattern, used for many years by installers of commercial and industrial oilburners, which gained its great popularity because of its many virtues. Its most outstanding characteristic lies in its use of natural draft provided by a chimney. Many oilburner installations of this kind used natural draft because they were made in boiler rooms already equipped with chimneys, installed to provide natural draft for coal boilers. The trend today is away from natural draft and towards 100% forced draft, or induced draft.

fueloil & oilheat

for domestic oilburners, centrifugal blowers for 100% forced-draft, fuel units for pressure burners, and electrical combustion-safety controls which performed in certain, standardized fashions.

Detailed studies of brand-new and redesigned oil-boilers of commercial-industrial types, which have made their appearances in the last decade, show which way the wind is blowing —reveal which principles are valued greatly by designers, and which of the older principles now have fewer advocates than before. These detailed studies show startling differences between what was considered good and modern in large oil-powered boiler rooms ten or twenty years ago, and what is good and modern in such boiler rooms today.

For one big thing, for example, the use of chimney draft for a commercial-industrial boiler once was considered good. In fact, for many engineers and installers of commercial-industrial oilfired boilers, using chimney draft was the one way to cause most the combustion air, needed by the oil flame, to enter the combustion space of a commercial or industrial boiler, and get to the oil flame.

There's been a big change in that, and it's an excellent example of the changes which have been taking place, and which will continue taking place, in the field of all kinds of commercial and industrial oilfired boilers.

The swing has been towards movement of combustion air on a 100% mechanical basis — a motor-driven basis, that is. The trend has been towards the use of induced draft for commercial-industrial boilers, or the use of 100% forced draft.

Excellent reasons exist for the swing towards combustion air moved entirely by motor power, just as excellent reasons exist for other, modern trends.

Diag. 1 includes equipment that's been familiar for many years—equipment of an old pattern. Included is a cast-iron boiler, either designed for hand-fired coal but happening to be highly adaptable to oilfiring, or proclaimed by its manufacturer as 100% designed for oilfiring.

The same points could apply to a steel boiler of any of several types, used in an arrangement similar to that in Diag. 1. A steel boiler could be coal-designed, yet highly suitable for oilfiring. Or it could be designed from scratch for oil.

For many years in the past, oilburner men in general found the arrangement in Diag. 1 highly satisfactory. Today, still, many burner men offer set-ups of this type to their customers, emphasizing that it's simple and rugged, and provides maximum capacity per dollar spent on the equipment.

In Diag. 1, natural draft, provided by a chimney, provides the power that moves about 80% of the air, needed for combustion, into and through the boiler.

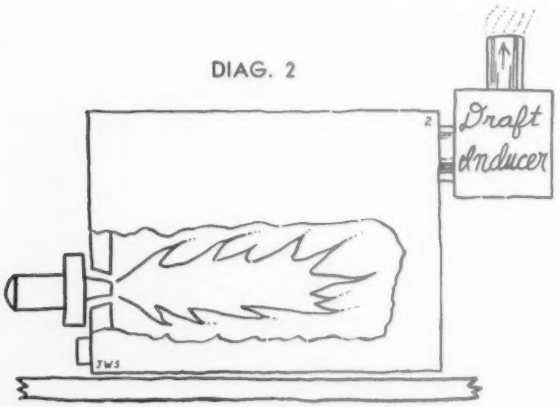
With the firing rate in the range of 15 to 50 gph, the aim may be to have the over-fire draft, or the combustion-chamber draft, at minus .05" water with the burner firing.

Taking into account the draft-drop or pressure-drop through the boiler, its smoke-outlet draft must be sufficiently above .05" to maintain the proper draft in the combustion chamber.

Diag. 1 includes a barometric draft regulator on the smokepipe, serving to prevent the smoke-outlet draft from becoming excessive.

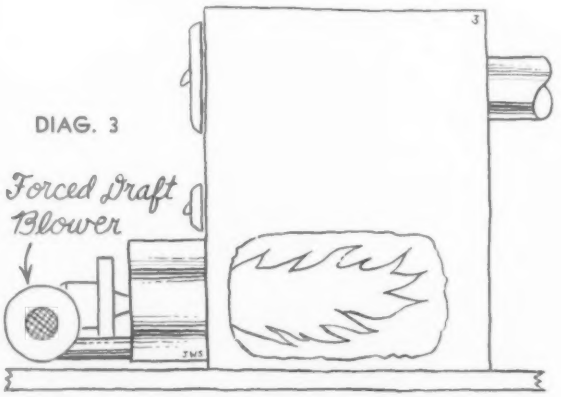
Having a smokepipe draft regulator, the equipment in Diag. 1 uses the same draft-control principles employed for most domestic oilburner installations. Using these principles, the premise is that an adequate chimney can develop, in normal operation, more draft than is needed on the smoke outlet of the boiler it serves. A swinging-disc or swinging-gate draft regulator on a smokepipe can

DIAG. 2



Diag. 2—One of the greatest advancements in commercial-industrial oilburning during the past decade lies in the use of draft inducers or induced-draft blowers. Many already-installed oilburners can be made to operate properly only through installing draft inducers. The use of such inducers on installations of new boilers can alter and greatly improve entire design aspects.

DIAG. 3



Diag. 3—Forced draft is becoming more and more popular in the field of commercial-industrial burners. Reliance on natural draft, for providing combustion air, was a characteristic of many of the early, domestic oilburners. These burners had no blowers. For years after typical, domestic burners had acquired centrifugal blowers to provide 100% forced draft, typical installations of horizontal rotary-cup burners continued to depend on natural draft for about 80% of the air needed for combustion. Today the trend in the commercial-industrial field is to avoid use of natural draft.

ENGINEERING NEWS

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BULLETIN No. 51A. UNIVERSAL REGISTER UNITS

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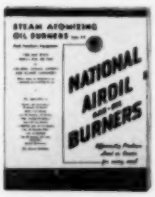


BULLETIN No. 21. STEAM ATOMIZING OIL BURNERS

16 pgs. Describes "SA" Burner for use where steam or compressed air is available for firing many types of industrial process furnaces. 5 sizes have rated capacities from 10 gph to 725 gph.

provide draft control only if the chimney is capable of developing excessive draft. Such a draft control closes, providing no control of draft, if a chimney provides draft that's just enough, or insufficient.

At best, natural draft provided by a chimney is a feeble force for moving combustion air into a boiler, and for causing products of combustion to move through and out of a boiler. It is feeble compared to motor power, which can be used to move combustion air, and products of combustion.

Therefore the draft drop through a cast-iron or steel boiler, of the arrangement in Diag. 1, is necessarily limited. As the result, the flue passages can be long and torturous only to a certain degree. The velocity of the gases passing through the flue passages is limited; the Btu transmission rate of the secondary heating surfaces similarly is limited.

These factors boil down to the point that the metal of the secondary heating surfaces cannot be used in the most effective fashion, in Diag. 1, on a basis of heat transmission through this metal—because natural draft provided by a chimney is at best a feeble force, which can move products of combustion through a boiler only slowly and sluggishly. That's compared, of course, to using motor power to move air and gases.

Again, the equipment in Diag. 1, whether it includes a cast-iron boiler or a steel boiler, is rugged and simple; this pattern provides much boiler capacity for the money spent on the equipment, if it includes any of several types of boilers popular for heating apartment houses.

If the boiler is selected properly for this, the boast about the equipment in Diag. 1 can be that it is long-lived; another boast can be that the oil flame, burning in relatively large combustion space, is uncommonly quiet.

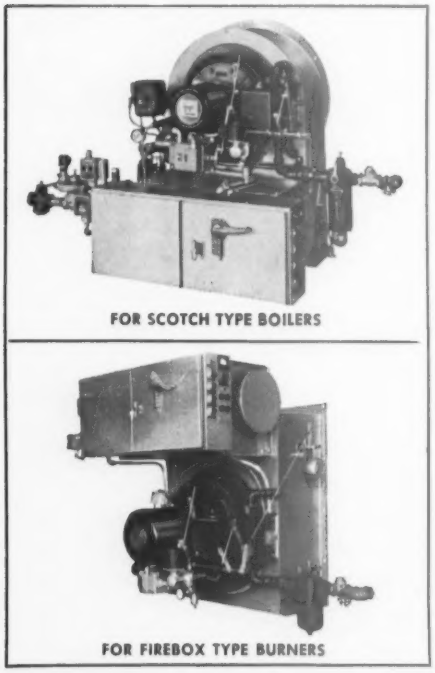
Diag. 2 represents an advancement of recent years—the addition of a draft inducer to a boiler-burner set-up.

Diags. 1 and 2 have this in common. The boilers in them operate under slight vacuum or slight negative draft, provided in the first instance by the chimney, and in the second instance by the draft inducer.

Boilers should be free of cracks and crevices through which air or products of combustion can flow one way or the other, out of the combustion spaces and flue passages into boiler rooms, or into these spaces and passages from boiler rooms. Ideally, a boiler should be hermetically tight in this respect. It should have no leaks, for example, around its flue clean-out doors; it should have no leaks at other locations, which produce the same effects as leaks around clean-out doors.

If there's a plus pressure in a boiler, no products of combustion should escape from it into the boiler room—it should be free of "gas leaks" (that's short for "products of combustion leaks," for these can give a gassy effect in a boiler room).

If there's a negative pressure, a slight suction, within a boiler, no boiler room air should enter the boiler



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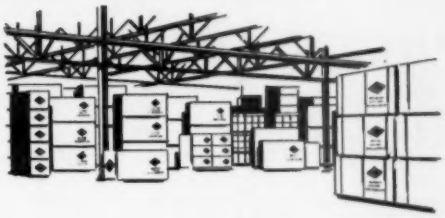

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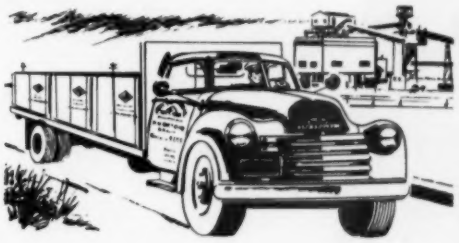

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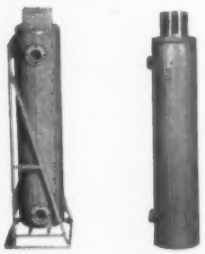

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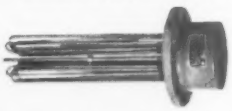

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COMMERCIAL & INDUSTRIAL oilburning

through cracks and crevices; the boiler should have no "air leaks," for these subtract from efficiency and waste fuel.

But if there are such leaks in a boiler (many boilers in actual operation inevitably do have slight leaks of this kind) the patterns of Diags. 1 and 2 will cause boiler-room air to enter the boilers through the leaks. Diags. 1 and 2 have that advantage in common. It is a great advantage, if a boiler does have air leaks or gas leaks, for to have boiler-room air enter the leaks is greatly preferable to having products of combustion escape from a boiler and wind up in the boiler room.

Induced draft is positive

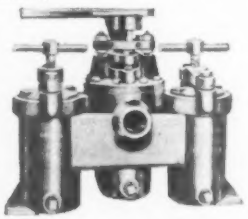
The use of induced draft, in Diag. 2, has many advantages, great and well known, over the use of natural draft provided by a chimney. Induced draft is positive and mechanical. Chimney draft is feeble and uncertain on many oilburner installations. There's chimney draft only as the result of a chimney's being hot and full of hot products of combustion; hence on cold start-ups, with boilers and chimneys cold, there's no chimney draft.

A draft inducer can provide much higher draft than a chimney provides. It can create a much greater pressure difference in a boiler than a chimney can provide. The draft inducer can, then rush hot gases through tortuous boiler flues at the high speeds that correspond to high rates of heat transmission for the secondary heating surfaces. As the result, designed for induced draft, a new boiler can provide a low stack temperature and a low stack loss for the amount of metal used in it for heat transfer. If high draft is provided for a boiler already installed (perhaps designed for hand-fired coal) by a draft inducer, flue baffles can be added to the boiler to lower its stack temperature.

KRAISSL SEPARATORS

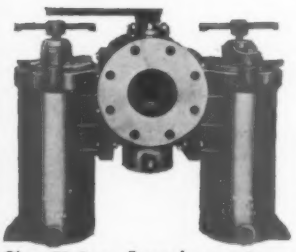
Why you need KRAISSL SEPARATORS

- **UL listed**—you'll find the Underwriters' Laboratories marker on sizes used with automatic oil burning systems.
- **Minimum pressure loss**—high straining area ratios assure minimum pressure loss, which is so critical in suction lines.
- **Versatility-economy** — interchangeable, low-cost baskets eliminate need to buy complete separators for different screening requirements.
- **Selection** — single and duplex models, 1/4" to 6"; working pressures to 400 psig in cast iron—steel construction for higher pressures.



Class 72 integral duplex separators
Bulletin A-1430

Class 72 single separators
Bulletin A-1882



Class 72 3-pc. flanged separators
Bulletins A-1879—1431

KRAISSL CO. Inc.
295 Williams Ave., Hackensack, N. J.

Mr. Oil-Heat Dealer

Would You Like 4 NEW

Profits?

THERMOBLOC OFFERS:

PROFIT on Sale of Heater
PROFIT on Installation
PROFIT on Service Contract
PROFIT on Sale of Oil

Now you can get your share of the BIG Industrial Heating market. Thermobloc Industrial and Commercial Warm Air Heaters will now be sold through Oil Heat Dealers, on an **exclusive** territorial basis.

This heavy-duty equipment is made in a complete range of sizes from 200,000 Btu/hr. up to 1,250,000 Btu/hr. Economical, long-life Thermobloc can be installed in hours. Ideal for warehouses, factories, foundries, garages, rinks and other structures.

You make no investment — just order when you make a sale.

Write for complete details today!

WANSON CORPORATION
Lewistown, Pennsylvania

Gentlemen, We would like more information on the Thermobloc Industrial Heater Dealership.

The territory we serve is _____

_____

Name _____

(Please attach coupon to your Company letterhead)

– SALESMANSHIP –

Here's an actual training course in selling based on tested sales principles and techniques.

The
"SELLING MAN"

This is specialty salesmanship with emphasis on burner selling. A valuable book for your sales staff. Blue cloth binding, 6 x 9 inches, 260 pages. The price only $4.00, plus 25c to cover cost of handling and postage.

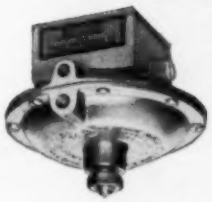
•

Please send your remittance with order to:

fueloil & oil heat
2 West 45th St.
New York 36, N. Y.

Dewey **SAFETY AIRFLOW AND PRESSURE SWITCHES**

World Leader for Dependability



"D" Series Switch shuts off fuel if drop in fluid or gas pressure occurs.

"114" Series Switch shuts off fuel if blower fails.

Thousands sold. Factory Mutual and Underwriters Laboratories Approved. Standard equipment on leading products. Write for prices and literature.

FREE CIRCULAR —

Dewey Gas Furnace Co.
102 E. Baltimore • Detroit 2, Michigan

PROTECTION FOR: Oil Burners—Industrial Ovens and Boilers—Power Gas Burners

Profits Profits Profits

REWARD

For handling the line priced to sell for profits

★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★

RAY BURNERS

★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★

WEBCO-RAY PACKAGED UNITS

When you represent brands with proven performance and service, you get greater sales volume and profits. Ray Burner Co., industry leader for 46 years, is selecting franchised dealers now for certain territories. You may qualify to handle reliable Ray oil, gas or combination gas-oil burners. And here's a big feature—some Ray dealers may now take on popular Webco-Ray packaged boilers. With these two lines you are handling a complete range of combustion equipment. Simple, clean, profitable. Send letter today for an appointment. It may mean greater sales and profits for you.

RAY BURNER COMPANY

WEBCO-RAY
PACKAGED BOILERS

1301 San Jose Avenue, San Francisco, California 6350

COMMERCIAL & INDUSTRIAL oilburning

Designed entirely to make best possible use of induced draft, a new boiler-burner unit, or package boiler, works out to be greatly different than a boiler designed to use chimney draft. For its size and the amount of heat-transfer metal in it, the induced-draft, new boiler can provide surprisingly high capacity together with exceptionally high efficiency. Such a boiler needs no chimney, of course.

Forced-draft is versatile

The forced-draft idea, represented in Diag. 3, can be used in several ways.

It can be used, as usually it is on a domestic installation including a gun-type oilburner, for the one purpose of proper metering of the combustion air by a centrifugal blower—and with a negative pressure or minus draft in the combustion space of the boiler, provided by chimney draft.

The boiler in Diag. 3 could, then, be connected to a chimney, which is intended to provide negative over-fire draft. With things arranged that way, the forced-draft blower in the drawing would be serving the one purpose of feeding or metering the combustion air to the flame at the proper rate. The function of the forced-draft blower in Diag. 3 would be identical to the function of the centrifugal blower in a gun-type, domestic oilburner. Draft would be needed on the smoke-outlet of the boiler—to keep the over-fire draft properly negative, as it is in most house-heating furnaces and boilers. With the draft provided by a chimney in the conventional manner, the smokepipe would need a conventional draft regulator or, on a large installation, a smoke-outlet damper of an over-fire draft control system. That is to say, control of the smokepipe draft would be needed, of one type or another, for the same reasons the smokepipe draft is controlled on domestic installations which include forced-draft oilburners.

Workshop Panel discusses comm.-ind. selling Program

THERE WERE FIFTEEN panels on the program of the National Fuel-oil Council Promotional Conference, which met in Atlantic City, March 10 and 11.

One of the topics covered was "Commercial - industrial Selling," which has become an important phase of oilheating operations in a number of areas. The panel, which had Joe Mulvey, Paragon Oil Co., as moderator and Frank Cady, OHI of Rochester, N. Y., as chairman, presented the background of the commercial-industrial market in three cities.

First, in South Bend it was reported that the local utility had been successful in selling electric heat to schools. However, when the local oilmen protested to the school board and presented a convincing case on the basis of cost and dependability, the board switched to oil for a new school. The publicity helped all phases of the fueloil business and the local group now has a functioning emergency committee to continue the fight against electric heat.

Rochester's Program

Bridgeport, Conn., reported a discouraging experience where the school authorities were adament in sticking to gas for school heating in spite of a damaging explosion. The fueloil dealers there are also faced with difficult competition from dump gas sold during the summer months at a very low price.

The most detailed presentation was made by Frank Cady, the panel chairman, who presented this outline of the Rochester, N. Y., commercial-industrial program:

"THE PROBLEM:

"After an extensive five-month survey, placing special emphasis on recent or projected gas jobs, we found:

"1. Oil was considered as a second choice fuel.

"2. Almost everyone could recite the advantages of gas.

"3. Everyone knew the disadvantages of oil.

"4. There was no clear understand-

Industry's broadest line of Fuel Oil Preheaters provide . . .

★ HIGHEST BOILER OUTPUT

★ LONG SERVICE LIFE

★ MINIMUM MAINTENANCE

In this line . . .

GENERAL Type HMT Automatic Electric Immersion Heaters provide closer temperature control through rugged, simple design!

- Integral-mounted thermostat designed for long life . . . provides for simple field adjustment within 120°-260°F range if desired.
- Wide output range . . . 5 to 36 KW.
- Broad voltage range . . . choice of watt densities.
- Speedier installation, interchangeability . . . 3" ASA mounting flanges rated at 150 or 300 pounds.
- For complete details, request Catalog EH-100.

Catalog EH-100 describes complete line of electric Fuel Oil Preheating Units (750 to 60,000 watts).

Request your copy today!

GENERAL FITTINGS COMPANY

EAST GREENWICH • RHODE ISLAND

"It Wasn't Always This Quiet at 6:30 A.M.!"

Brame Witmer recalls the old days of early morning service calls before switching to New Gulf Solar Heat.

Gulf has been contributing to Brame Witmer's success for many years. He pays close attention when a Gulf Representative explains new direct mail material. Brame also uses Gulf co-operative newspaper and radio advertising.

IN 1935, Brame Witmer bought a used truck for $312 and began hauling coal around Lancaster, Pennsylvania. He expanded his business gradually; first became a coal dealer and then—in 1945—started in the fuel oil business.

Today he sells Gulf Solar Heat exclusively and is one of the busiest fuel dealers in the county.

"Service used to be a problem," Brame remembers, "before Gulf developed new Solar Heat. But not any more. Every year since I started with Gulf Solar Heat, my business has improved," he says. ". . . Even in 1959 when we had a very warm winter. Many of my new customers came to me because of the burner service we offer—I bought out a burner sales and service outfit in 1951. But quite a few come to us because they want Gulf Solar Heat. They've heard that it burns cleaner, causes less trouble.

"The Gulf name certainly means something around here. Look what it has done for me!"

• • •

Brame Witmer knows it's the *hydrogen purification* process that makes Gulf Solar Heat burn exceptionally clean and give customers trouble-free heat. He can't say enough about Solar Heat.

His profits are much bigger because service calls are fewer. *Hydrogen-purified* Gulf Solar Heat stores and burns cleaner.

Why not phone your nearest Gulf office . . . Get the full story on new Gulf Solar Heat. Learn the many other sales and promotional advantages you can enjoy as a Solar Heat brand reseller. Do it today!

Go one better — Go Gulf

GULF SOLAR HEAT® heating oil

OIL HEAT'S BEST

The Witmers' large comfortable house attests to Brame's success. He started with a second hand coal truck, now owns an entire fleet. Here's Dad, Mother, John, Karen. Another daughter is away at college.

The boss gives all drivers complete instructions before starting the day's run. There isn't a job that Brame doesn't know as well as the man who handles it. He's at his desk every morning at 6:30!

ing of the fuel cost picture even among consulting engineers.

"5. No one knew where to turn for information or assistance on oil-burning.

"6. We found that the local utility maintained an architects and engineers department and a commercial-industrial sales department. Both are well staffed with competent personnel.

"7. We found that the local utility was regarded as an unbiased source of information on fuels.

The Action taken

"THE PROGRAM:

"1. We have prepared in presentation folder form a complete fuel cost analysis at all levels of consumption for both space heating and industrial processing.

"2. We have prepared and included in our folder an unusual fuel cost graph covering consumptions from 0 to 72000 therms per month. In a few seconds from this graph it is possible to figure either gas or oil bills and the cost differential between fuels.

"3. We have appointed a recognized consulting licensed professional engineer as Technical Director of this association. He is available at no charge to architects, engineers, school boards and industry for consultation in planning new construction or in proper utilization of existing installations. He is available to the Managing Director for consultation or calls as required. He is available to members of the association on the following basis:

a. For consultation on new construction or existing public bid business at no charge.

b. For consultation on unbid C-1 accounts at half of expenses incurred.

"4. Our program including the cost folders and Technical Director together with a speech covering the problem of fuels by the Managing Director was presented to the local architects and engineers at a reception, cocktail party and dinner given for them by this association. Our program was given a reception far beyond our most optimistic expectations. Our board of Directors considers it to be the best single investment of money we have ever made.

"THE RESULTS:

"1. During preliminary survey period we were able to establish more than 1 million gallons of new annual business that had been planned for gas.

"2. In the three months since the public introduction of our program we have been able to establish about 2½ million gallons annual business.

"3. We are currently consulting on an additional 2½ to 3 million gallons on which no decision has been reached.

"4. We are becoming a recognized source of reliable information on fuels and combustion and receive many requests for specific fuel costs comparisons.

"5. We debate fuel selection for new buildings with the local utility before public boards.

"6. We are currently working on two actual operating comparisons. One is in a new high school with dual firing boilers. The other is in an insulator plant firing two ceramic ovens and consuming 1500 gallons of No. 2 oil daily."

Cady then told of a presentation the OHI of Rochester had made, along with local utility representatives. They appeared before a school board and Cady subsequently sent this bulletin to his membership to acquaint them with the details.

"On January 26th this association and the Rochester Gas & Electric Corp. appeared before the Penfield School Board to make a presentation for each fuel for the new Cobbles School. We made what we hope was a professional presentation to an intelligent group of men. The R.G.&E. presentation was of such a character that we believe a review of it will be beneficial. The R.G.&E. position will be under statement. Our suggested response will be under answer.

Fuel Selection Chart

	WEIGHT	OIL	COAL	GAS
Present fuel cost	10	8	10	5
Future price Stability	7	6	6	3
Fuel Efficiency	8	7	7	7
Maintenance	8	6	5	7
Equipment Cost	10	8	5	10
Storage	5	5	3	0
TOTAL	48	40	36	32

A chart being used by the Oil Heat Institute of Rochester, N. Y., which evaluates the factors that influence the selection of oil, coal or gas equipment.

Pro and Con

"*Utility Statement:* In a beautiful new modern building you should consider only the modern fuel—gas.

"*Answer:* Both crude oil and natural gas come from the ground through the same pipe. When they are separated at the well head the gas is washed and odorized as a safety precaution. It then passes through a series of transmission companies until it reaches the ultimate consumer. What they get is a basic raw material that has been washed and odorized. On the other hand the crude oil that came out of the ground at the same time is sent to a multimillion dollar refinery where it is made into everything from lipstick, nylon base, jet fuel, lubricating oils to gasoline and heating oils. Each product is the end result of an advanced technology and each product is built to specifications, designed to do the best possible job. Which in your opinion is the modern fuel?

"*Utility Statement:* Oil burns much less efficiently than gas.

"*Answer:* This is a statement of the R.G.&E. or the American Gas Association. Independent authority gives equal efficiency to both oil and gas. Among these are the American Society of Heating and Air-conditioning Engineers and the University of Illinois. The manufacturers of gas and oil equipment provide equal efficiency of 80% on either and with #6 oil 83% efficiency.

"*Utility Statement:* Oilburners make much more soot than gas.

"*Answer:* Soot is the result of inefficient combustion of any fuel, not the fuel itself.

"*Utility Statement:* Oil is fired with excess air which carries off heat and unburned fuel.

"*Answer:* The CO_2 readings on oil equipment will be as high or higher than gas and net combustion effici-

(*Please turn to page* 130)

none better for 65 years

. . . NONE MORE COMPETITIVE FOR THE 1960'S!

For more than 6 decades, Moncrief Furnaces and Air Conditioners have been noteworthy for dependable, reliable performance . . . satisfaction that causes Moncrief owners by the thousands to insist upon another Moncrief.

As a bonus, increasing Moncrief sales have provided production efficiencies that permit consistently more competitive prices . . . without sacrifice of the qualities that make Moncrief Furnaces and Air Conditioners excellent.

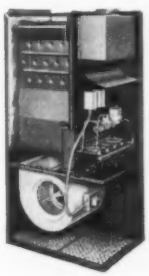
As a result, the new Moncrief Units are unsurpassed for astute design and heavy construction . . . priced to make you as competitive with new construction installations as you are profitable with replacement jobs.

Added to these advantages is the most complete Moncrief Line in 65 years . . . everything you need in heating and air conditioning from one, convenient source.

This source is your Moncrief Wholesaler, who carries your unneeded stock in his warehouse.

Call your Moncrief Wholesaler, now!

GAS FIRED
Assembled and Wired Winter Air Conditioners . . . Upflow, Counterflow and Horizontal . . . Heavy Gauge Heat Exchanger and Cabinet

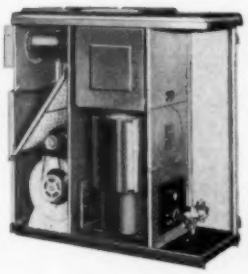


Interior View of Upflow Unit

OIL FIRED
Assembled and Wired Winter Air Conditioners . . . Upflow and Counterflow Heavy Gauge Round Heat Exchanger with Refractory Firebox

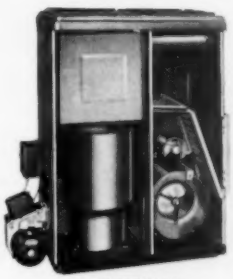
Interior View of Upflow Unit

GAS OR OIL
Basement Type Winter Air Conditioners . . . Burn either Gas or Oil with Equal Efficiency . . . Heavy Gauge Heat Exchanger



Interior of Unit with Gas Burner

OIL FIRED
Assembled and Wired Basement Type Winter Air Conditioners . . . Heavy Gauge Round Heat Exchanger with Refractory Firebox



Interior of Unit with Exposed Burner

MONCRIEF

THE HENRY FURNACE COMPANY • MEDINA, OHIO

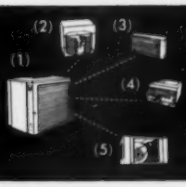
MONCRIEF SINCE 1895

HEATING AND AIR CONDITIONING UNITS

FURNACE PIPE AND FITTINGS

Horizontal Furnaces 4 Oil Sizes 4 Gas Sizes

Year 'Round Combination A.C. Units Air or Water Cooled, Gas or Oil Fired



(1) 2, 3, 4, 5 H.P. Air Cooled Condensing Units, (2) Plenum Evaporator, (3) Duct Evaporator, (4) Counterflow Evaporator, (5) Blower-Evaporator Unit.

Gas Conversion Burners

Gas Fired Unit Heaters, 5 Models

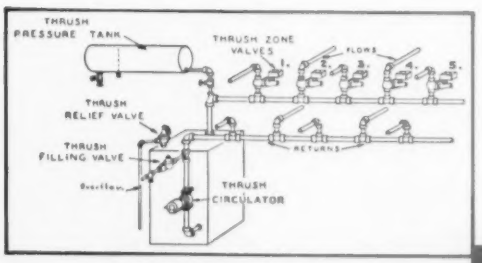
The Right Combination

For Economical MULTIPLE ZONING

One THRUSH CIRCULATOR now serves many zones...

WITH ONE Thrush Water Circulator and a Thrush Zone Valve for each zone, multiple zoning becomes easier to accomplish and at lower cost than ever before.

The sturdy and dependable Thrush Circulator provides plenty of power for positive circulation to every zone. The Thrush Zone Valve closes tightly so there is no wasteful circulation when heat is not needed and uncomfortable overheating is prevented. See your wholesaler for more information or write Department C-4.



Simple Zone System Diagram

The new Thrush Zone Valve greatly reduces original cost of multiple zone installations through simplified piping, low voltage wiring and less labor.

Quality Hydronic Heating Specialties

H. A. THRUSH & COMPANY

PERU, INDIANA

Twin Comfort

Fresh, Hot Water
at all times

Smooth, Even Heat
in every room

NEW H.B. *Smith-Pac Fourteen*

THE COMPLETE CAST IRON BOILER-BURNER UNIT — FACTORY ASSEMBLED

Here is the *most* efficient, oil-fired hot water package boiler in its class! It is now available factory-assembled and wired.

I=B=R Net Rating: 3-section 84,000 Btu; 4-section 126,000 Btu — by far the highest ratings of any cast iron package units of these sizes. Furthermore, it is a matter of record that the Smith-Pac will burn less oil for the same amount of heat than any other cast iron boiler-burner unit.

I=W=H Rating: Built-in tankless heaters are rated: 3-section boiler — 4 gallons per minute; 4-section — 5¼ gallons. Again, higher ratings than are available with tankless heaters in any competing 3- and 4-section boilers.

How is this possible? Because H. B. Smith Company — specialist in cast iron boilers for over 100 years — has, after years of research and study, developed an integrated package unit which represents the ultimate in economy, efficiency and dependability. Here is a package unit you can recommend and sell to your *best* customers with confidence that they will be *satisfied* customers. You will find it easy to install and you will find that call-backs and service calls are reduced to a minimum. And you will make money!

THE H.B. SMITH COMPANY, INC., *Westfield, Massachusetts* • *Since 1853*

fueloil & oilheat

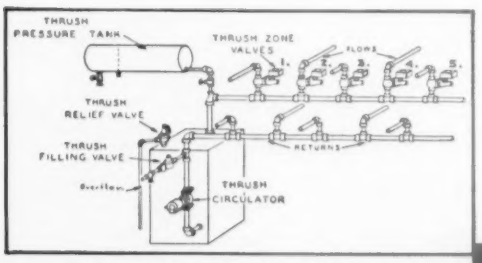
The Right Combination

For Economical MULTIPLE ZONING

One THRUSH CIRCULATOR now serves many zones...

WITH ONE Thrush Water Circulator and a Thrush Zone Valve for each zone, multiple zoning becomes easier to accomplish and at lower cost than ever before.

The sturdy and dependable Thrush Circulator provides plenty of power for positive circulation to every zone. The Thrush Zone Valve closes tightly so there is no wasteful circulation when heat is not needed and uncomfortable overheating is prevented. See your wholesaler for more information or write Department C-4.



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THE H.B. SMITH COMPANY, INC., *Westfield, Massachusetts • Since 1853*

fuel oil & oil heat

Truck Talk

by Chet Cunningham

HAVE YOU TRIED any of the new molybdenum additive grease on any of your delivery or service trucks? At last we have a report on the use of the new grease from an over-the-road fleet.

The report comes from a common carrier in Louisville, Ky. They run 65 tractors, 14 pick-ups and several passenger cars. Exact figures were kept on the cost of grease and lubing before and after switching to the molybdenum grease.

The moly grease went on the fifth wheel as a trial. Drivers quickly stopped making complaints about fifth wheel operation. Next the moly grease was used on kingpins, shackles and chassis parts. After a few weeks the owners decided that the good results were conclusive, and switched the whole fleet over to moly grease.

Here are the statistics: Before the moly was used, kingpin and bushings had been changed every 50,000 miles. After the use of moly lube the mileage was increased. Five new units that used moly grease from the start of service, traveled the following total miles without any rebushing: 148,000, 162,000, 191,000, 172,000, and 192,000.

In that particular state, the moly grease costs about 10¢ more per pound than the same grade and quality of regular lube. However on several points, less of the moly grease needed to be used for efficient lubing. This, plus extended grease schedules and longer parts life, is more than making up for the increased initial cost.

If you occasionally have trouble with loose hose clamps, here's an idea from Cummins Engine. They suggest that when clamps are installed over rubber hoses, you lubricate the clamp inside and the sliding points of contact under the tee-bolt joints. This will eliminate "puckering" the hose as the clamp will tend to slip around the hose rather than bind on the dry surface. Lubriplate or similar material can be used for the lubricating.

If the clamp does not slip around the hose, there is danger of the assembly being loose after the rubber adjusts itself to the pressure from the clamp. Loose clamps result in leaks and possible engine failure.

Don't try to break in your engine by letting it idle. Rather fill it with heavy duty oil and put it to work. You can get break-in suggestions for your engine from the maker. Usually you work it at about ½ or ¾ capacity, then slow her down, and add occasional spurts at full power for about 2 minutes at a time.

In this way the parts get a chance to wear-in together under actual load conditions. Most makers recommend an oil flush after the first 500 miles on a new engine. This helps flush out any foreign matter before it can damage your engine.

If you have a couple of batteries around your shop that you use as jumpers, be sure to give them a periodic booster charge every 30 days, and especially during hot weather.

A battery which stands for long periods can become damaged by self-discharge, and then by the formation of large lead sulfate crystals in the pores of the plates. In many cases damage is so severe that the battery can never be fully charged again.

The lowly air cleaner is in the news again. A lot of persons who should know better simply won't realize just how important that air cleaner is.

A dust-clogged filter may even reduce the air flow into the carburetor so much that the fuel mixture becomes too rich. This means excessive carbon build-up, fouled spark plugs, varnish and gum deposits, oil dilution, sludge and loss of power.

See what I mean? And even more important, as the filter becomes clogged, small particles of dust and dirt enter the carburetor and mix with the lubricating oil to form an effective grinding compound. This compound has the same effect on cylinder walls, rings and valves as rubbing them with sandpaper. That means excessive wear and shorter engine life.

High speed ruins tires. These two tires were driven on similar cars over the same road at the same load. The tire on the left went 9,200 miles at 65 mph, 5,000 miles at 70 mph, and 5,000 miles at 75 mph. The second tire went the 19,200 miles at a steady 60 mph. The one tire is a junker, the right hand tire still has lots of miles left. Give you any ideas about saving money on tires?

You say there's not much dirt in the air? Actually there are over one-million particles of dust in a single cubic foot of air, and it takes over 20 tons of that air to burn one gallon of gas. That should give you some idea of how much dirt your cleaner stops.

When the filter has absorbed its limit, the dust and dirt go right on through into the engine. And that means more work for the garage boys.

A new tire is now in fleet evaluation. It's almost twice as wide as present tires and replaces dual tires. Its load carrying capacity is more than the two tires it replaces and it saves tire and rim weight of 124 pounds per dual wheel. This means less unsprung weight, lower spring rate, no sidewall damage from rocks wedging in between duals. It's a Firestone product, should be out soon.

The next time somebody yells at you in traffic, remember that some people never learn that personal abuse isn't much of an argument.

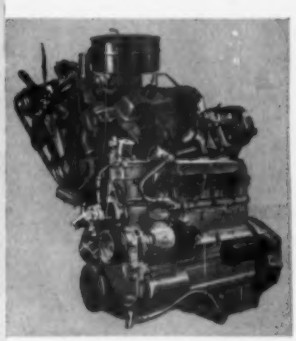
How Dodge Cab-Forwards TOP THE "TILTS" in engine accessibility

New Servi-Swing fenders do the trick! You just unlatch them, they swing out 110 degrees and there's your engine: a sitting duck for fast, easy servicing. No costly tilting mechanism to go on the fritz. No worries about overhead clearance. No locking problems. It's the new approach to engine accessibility. And only Dodge offers it! But that's just the beginning . . .

Compact Dodge Cab-Forwards tape just 89¾" from bumper to back of cab. Driver sits safely behind the engine . . . behind the front axle, too, for comfortable riding. And he enjoys easy handling, top visibility, easy entry-exit and five-way cab ventilation.

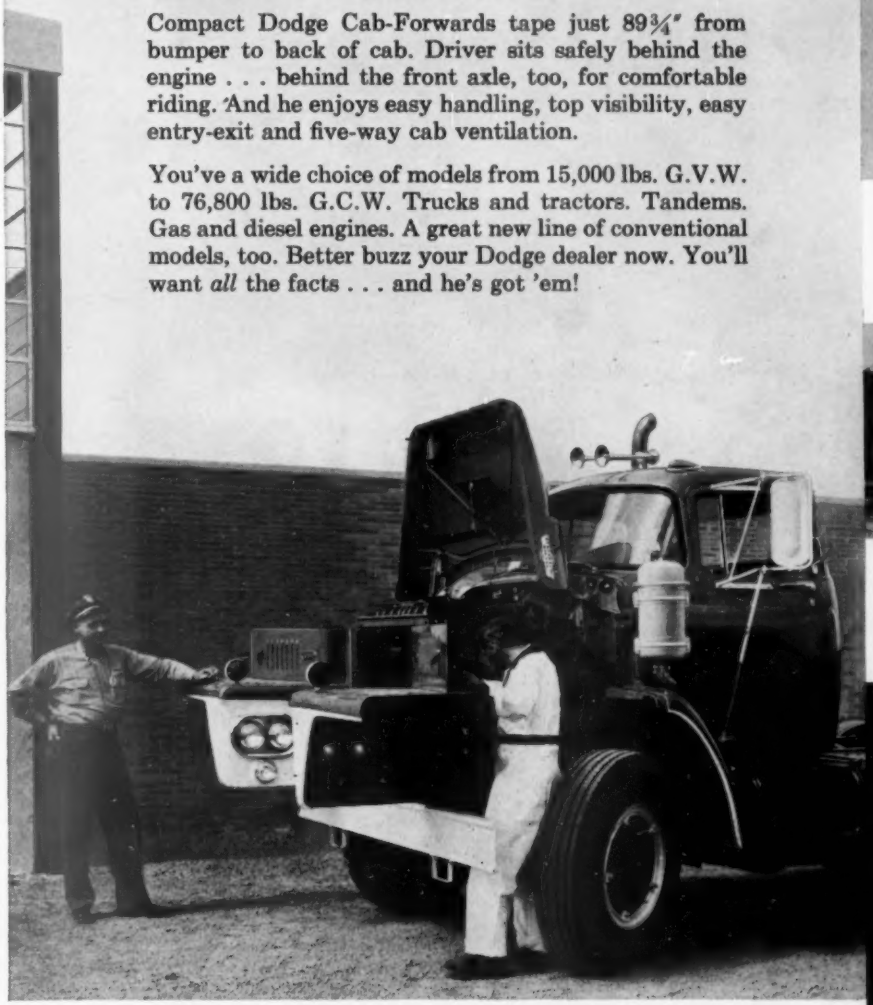
You've a wide choice of models from 15,000 lbs. G.V.W. to 76,800 lbs. G.C.W. Trucks and tractors. Tandems. Gas and diesel engines. A great new line of conventional models, too. Better buzz your Dodge dealer now. You'll want *all* the facts . . . and he's got 'em!

COMPACT 89¾" BBC makes your new Dodge Cab-Forward an easy handler, helps you meet legal length limits, boosts payload potential.



NEW ENGINE LINE-UP includes new gasoline V-8's from 178 to 228 hp. Thrifty Cummins diesels from 175 to 220 hp. now available for top fuel savings in high-tonnage models.

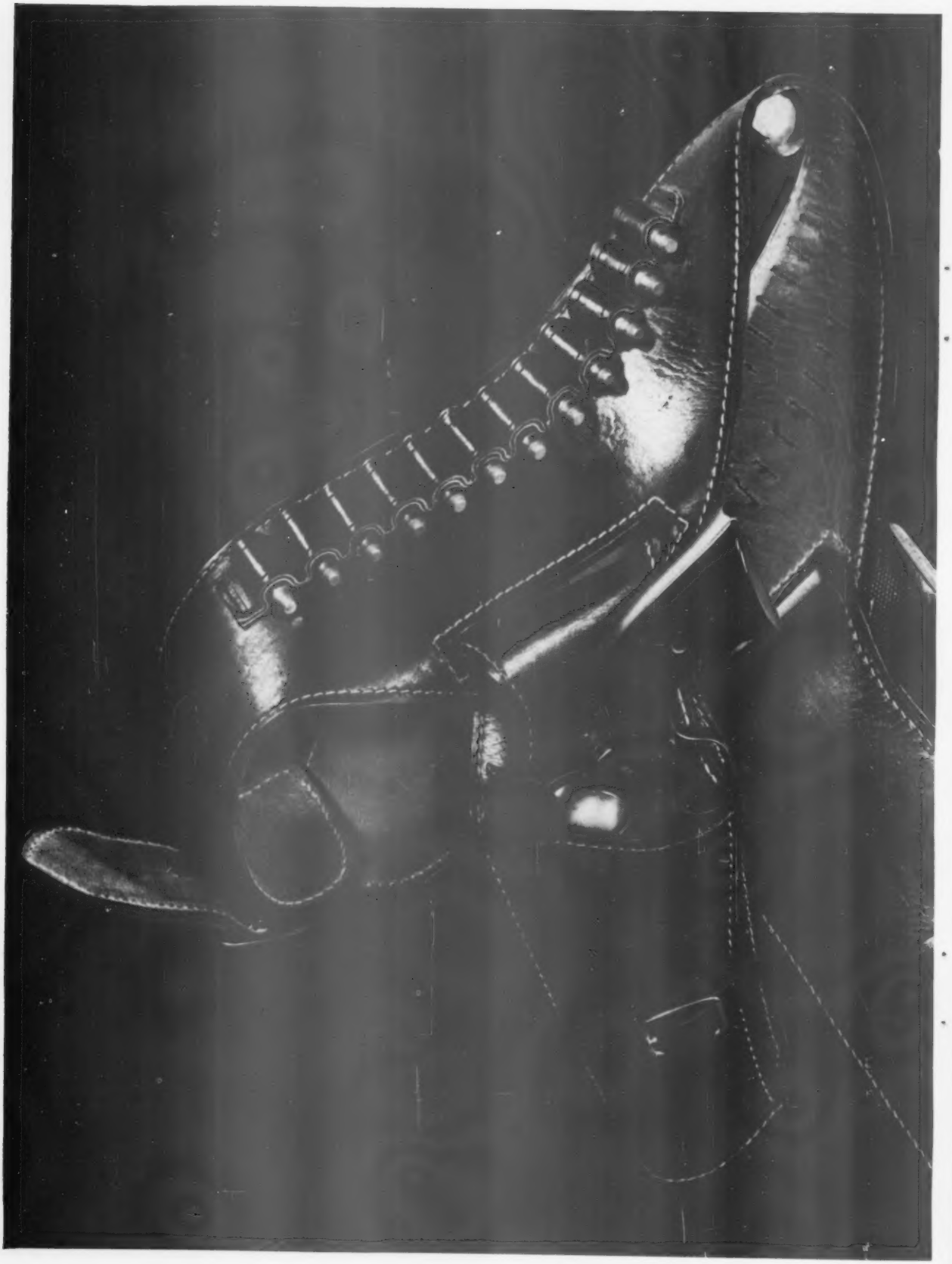
CONVENTIONAL MODELS offer new power in a wide choice of wheelbases to suit your needs. G.V.W.'s to 25,000 lbs. G.C.W.'s to 50,000 lbs.



DEPEND ON **DODGE** TO SAVE YOU MONEY IN **TRUCKS**

A PRODUCT OF CHRYSLER CORPORATION

Fuel oil & oilheat



Blanks or Bullets for your sales showdown?

The prospect sat meditating an important decision. His hand reached for the phone. He had to decide now. Which heating and air conditioning system would be right for his home? Finally, quick drawing Lennox advertising and promotion directed his call to a Lennox dealer.

Now the dealer took over... it was time for the showdown!

This Lennox dealer—backed by intelligent, well-directed national advertising... workable local sales tools and special training programs for his installation crews... faced the situation squarely. He made the sale.

When Lennox triggers a sales promotion, it's aimed at building the dealer's business on a *sound* and *profitable* basis. We want to help him become the recognized heating and air conditioning expert in *his* community.

If your sales ammunition is making a lot of noise without results, it's time for you to get the lowdown on the profit potential of a Lennox dealership. Get the "on target" facts ... write or phone for the full Lennox story, today.

LENNOX *World leader in indoor comfort for home, business, schools*

Lennox Industries Inc. founded 1895 • Marshalltown, Iowa • Columbus, Ohio • Syracuse, N. Y. • Fort Worth, Texas • Salt Lake City, Utah Decatur, Ga. • Los Angeles, Calif. • Des Moines, Iowa • Lennox Industries (Canada) Ltd. • Toronto, Montreal, Calgary and Vancouver

Three more Areas apply for servicemen's Certification

THREE MORE AREAS have applied to the Distribution Division of the Oil Heat Institute of America for permission to hold OHI-sponsored certification examinations for oil heat servicemen in the respective areas. They are: The Michiana Oil Heat Institute of South Bend, Ind.; The Oil Heat Institute of Indianapolis; and the Capital District Fuel Association, Albany, N. Y.

The Albany examination took place March 2 and the Indianapolis exam. on March 22. Date for the South Bend exam. will be April 13.

The holding of these three examinations will bring the total areas certified under OHI standards to five. Certification examinations were held in November in Connecticut and Florida under the local sponsorship of the Oil Heat Institute of New England and the Better Home Heat Council of Florida.

Fifty-six men in the South Bend area have already signed up for the examination and it is expected that the number of men taking the exams in the three areas will total over 200.

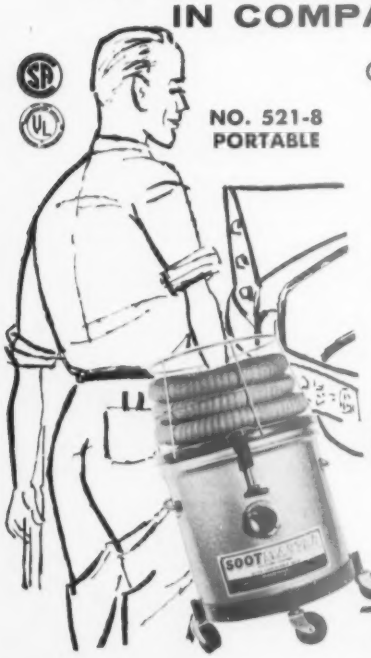
Applications to hold certification examinations are coming in from areas all over the United States. It is expected that by the end of next spring, at least one thousand servicemen will be certified by the OHI of America.

Oil heat companies with over 50% of their servicemen certified under the OHI standards are permitted to display a special seal on their trucks, office windows, etc., stating that their oilburner service technicians have been certified by the Oil Heat Institute of America, and the certified servicemen are given lapel pins and wallet cards attesting to their certification. Permission to a company to display a certification seal runs for one year, when it may be renewed providing more than one-half of the servicemen are so qualified.

Details concerning the servicemen's certification examinations may be secured by writing to the Distribution Division, Oil Heat Institute of America, Inc., 500 Fifth Avenue, New York 36, N. Y.

At the 27th annual dinner dance of the Oil Heat Institute of Westchester, Thomas A. Brown (right) receives from President Karl G. Richards the association's highest award. The gold plaque commemorated "his years of service and magnanimous contribution toward the progress of oilheating on local, state and national levels." Brown is a Westchester director and past president, is past president of the Empire State Petroleum Association and has been active in API and NOJC affairs.

"SOOTMASTER FOR 1960" LATEST PRODUCT OF ADVANCED ENGINEERING AND RESEARCH IN COMPACT INDUSTRIAL CLEANING.



CHECK THESE FEATURES:

1 – Maximum filtration for lasting suction.
2 – Powerful turbine fan suction unit.
3 – Exhaust design gives controlled exhaust of clean filtered air, eliminating disturbance of dust accumulation on basement walls and rafters.
4 – Easier handling because of its lightweight and compact design.
5 – Disposable paper filter bag eliminates messy soot disposal.
6 – Dollie has four swivel casters for finger-touch maneuverability.

SOOTMASTER is the cleaner judged to be the most economical to use and is proclaimed to be the heating man's right hand.

Shown here is the Model 521-8 Portable and Model 581 for heavy duty maintenance. Several other models are available.

WRITE FOR DESCRIPTIVE LITERATURE

Distributed in Canada by:
Imperial Refractories & Equipment Ltd.
Refractories Building,
Waterloo, Ontario

JOBBER & DISTRIBUTOR INQUIRIES INVITED

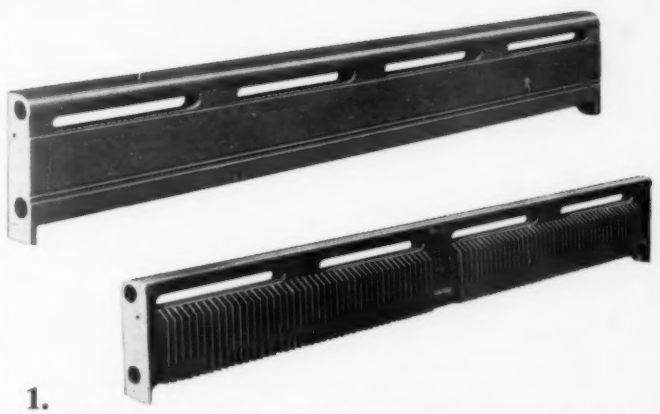
mastercraft INDUSTRIES INC.
109 LANZA AVE., GARFIELD, N. J.

CUSTOMERS YOU MEET... by BURNHAM

THE PRICE FIEND

... and how you can sell him the value of BURNHAM BASE-RAY®

No matter how you squeeze your price, this customer always tells you someone else has quoted lower. Don't despair. It shows he wants full value for his money. If you point out the value of BASE-RAY Cast-Iron Radiant Baseboard he'll be sold. Start by telling him these six points . . . you'll make the sale.

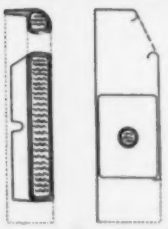


1.

Lowest lifetime cost! BASE-RAY'S one-piece cast-iron construction can't dent, warp, rattle, or come apart like some fabricated baseboards. BASE-RAY'S durability and reliable performance have been proved in over 75,000 installations.

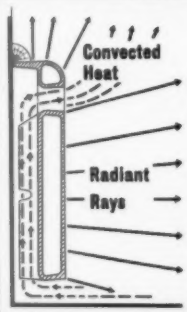
2.

Like bringing the sun indoors! BASE-RAY warms your home directly with gentle radiant rays like sunshine. This natural radiant warmth is the kind your body prefers for comfort and health.



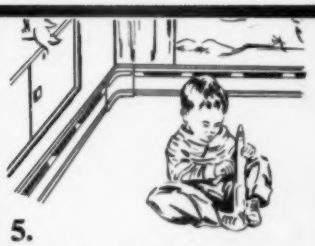
3.

Constant comfort. Because BASE-RAY contains a far larger volume of water than fabricated baseboards it holds heat longer . . . releases *steady* heat long after burner shuts off.



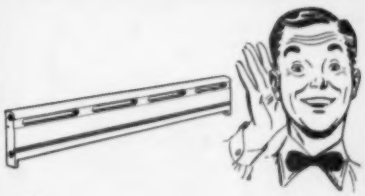
4.

Warm floors and walls. BASE-RAY floods the floor with healthful radiant warmth. It blankets outside walls and windows with an even curtain of heat. Floor-to-ceiling temperatures vary less than 3° even in zero weather.



5.

Looks like wood baseboard. Slim, modern BASE-RAY is 35% thinner than fabricated baseboard of equal capacity. Entirely unobtrusive—complete decorative freedom.



6.

Silent. BASE-RAY is all cast iron . . . no dissimilar metals with different expansion rates. No expansion creaks and groans, as with fabricated baseboard. No "pings" either.

Burnham Corporation

Heating & Cooling Division
Irvington, New York

First in the manufacture of baseboard heating

MEMBER

Burnham Corporation
Irvington, New York

FO-B-40

Please send me, without obligation, full ratings and data on BASE-RAY ☐ BURNHAM BOILERS – OIL ☐ GAS ☐

Name .....

Address .....

City ..... State .....

Schaetzel named new President at Wisconsin Petro. Meeting

ELECTION of officers at the 34th annual convention of the Wisconsin Petroleum Association held in Milwaukee resulted in the naming of Lavern Schaetzel, Schaetzel Oil Co., Germantown, Wis., as president.

James F. Fitzgerald, F-W Oil Co., Janesville, is 1st vice-president; Elbert G. Wingfield, Wingfield Oil Co., Manitowoc, is 2nd vice-president; Dave W. Gluck, International Oil Co., Milwaukee, was re-named treasurer.

At the largest convention that the organization has held, the sale and promotion of fueloil and oilheating was featured. There were talks by I. M. Nelson, Boston Machine Works, "Fueloil and how to sell It"; Albert L. McDermott, "Federal labor Legislation and the petroleum industry"; L. S. Marshman, Mobil Oil, "Where do We go from here?".

The convention also featured exhibits of oilburning equipment.

SMALL CHANGE STOPS BIG NOISE !

Noisy pumps are a nuisance. And, one of the toughest noises to solve is the one caused by cavitation . . . the result of "pulling" a liquid until it comes apart. This forms liquid voids (bubbles) that collapse with a bang when they hit high pressure at the pump discharge. Blackmer reduces this cavitation noise and vibration with a small but important design change (special grooves) in the cylinder which cause the bubbles to collapse more gradually and quietly. Extras like this make Blackmer pumps favorites of fuel oil dealers everywhere. Write for Bulletin 200.

"liquid materials handling"® equipment

BLACKMER / truck pumps

BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICHIGAN

Find your Blackmer Man under "Pumps" in the Yellow Pages

Northwest Jobbers elect Officers; hold Workshop

NEW OFFICERS for the Northwest Petroleum Association, Minneapolis, Minn., have been announced: President, Al Saunders, Forman, N.D..; Vice-president, Craig Shaver, Wayzata, Minn.; Vice-president, Bob Streeter, Bismarck, N.D.; Treasurer, Ed Kopplin, Litchfield, Minn.; Secretary, H. F. Horning, Minneapolis.

On March 7 the group gathered for a four-day management workshop. The final day included a session with talks on fueloil marketing by Myles Hall, Como Oil Co., Duluth, Minn., and Charles Kramb, Gulf Oil. Both men then moderated a panel.

Heating-Cooling Council names plans Chairmen, staff Managers

NEW PLANS BOARD chairmen and staff managers have been announced by Franklin Greene, executive director, Better Heating-Cooling Council, marketing-promotion arm of the hydronic industry.

Robert W. Williams, general marketing manager, American Standard, New York, is Residential Division plans board chairman.

Henry M. Gibb, sales manager, Pacific Steel Boiler Div., has been named to the same position with the group's Commercial and Industrial Division.

Staff managers named are Ray Schumack for the Residential Division and Douglas Grewer for the C&I Division. Grewer is a new Council staff member and formerly was with a technical public relations agency; Schumack has been with the Council since it was organized in 1956. He formerly was on the public relations staff, Institute of Boiler & Radiator Manufacturers.

Gibb

Williams

NEW

ONLY
$5\frac{27}{64}$" H
$3\frac{5}{32}$" W
$2\frac{7}{32}$" D

SERIES 530 combination fan and limit control is available *with or without* manual switch for continuous fan operation.

SINGLE ELEMENT, COMBINATION FAN & LIMIT CONTROL

Here it is! It's all new... yet, each component part is proved by years and years of dependable, accurate performance in the field!

Look at its compact, *space-saving size* and shape... see its *easy-to-install single element* which is solid charged for utmost *accuracy and reliability* in responding to temperature changes. Now, look at the inside... notice its two separate *sealed contact units*, one for the fan and the other for the safety limit. Large, accessible terminals assure *easier wiring*. Note the large, easy-to-read numerals on the limit and fan scales... indicators provide simple, *finger-tip adjustment* for any desired fan operation or limit setting.

Learn more about this new control... ask your wholesaler or write to the Penn factory!

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

Directors at OHI of Rochester elect a new Slate of Officers

ROBERT RAE, J. H. Rae Oil Co., has been named president of the Oil Heat Institute of Rochester, N. Y. Larry Rutledge, Independent Gasoline & Oil Co., was named vice-president by the group's board of directors and William Huberlie, Hub Oil Co., treasurer.

The group met on March 23 to hear a report of the National Fueloil Council Promotional Conference held March 10 and 11. At the same meeting Irving Koval outlined plans for the oilburner service school which will start in April.

Warm Air Association has revised Schedule of Meetings

A NEW METHOD of scheduling for its semi-annual Committee meetings has been announced by the National Warm Air Heating and Air Conditioning Association, Cleveland. It selects the dates of such meetings several months in advance and spreads them over a two-months staggered schedule. The following schedule for meetings—all to be held in Cleveland's Statler-Hilton Hotel—has been released:

Manual Committees

Technical Data—May 2-3.

System Performance (Manuals 1, 2 & 6)—May 5-6.

Air Conditioning Load Calculation—May 5-6.

Convection Systems (Manuals 4, 7 & 10)—May 10-11.

Panel & Panel-Convection (Manuals 4 & 7A)—May 10-11.

Systems Classification (Manual 8) — May 12-13.

Manual 9—May 12-13.

Short Course Committee—May 17.

Chairmen's Committee of Marketing Council—May 19-20.

Research Advisory Council—June 2-3.

Application Engineering Council—June 7-8.

Executive & Finance Committees—June 21.

Board of Trustees—June 22-23.

3½ years of trouble-free service
—with no leaks, no adjustment of springs—that's the experience with the Wheaton 3" Type 680 Loading Arm Assembly enjoyed by the Lincoln Park Fuel Oil Co., Lincoln Park, N.J.

You can load faster and cut maintenance costs with Wheaton Loaders

The Wheaton Type 680 Loader is "made to order" for the user who requires easy, fast operation and extremely low maintenance cost.

Users of this equipment have the same experience: complete freedom from leaks...even after years of service.

This Wheaton Loader is rugged—yet so easy to operate that it pays for itself in the time it saves.

Another economical installation of the Wheaton 4" Type 680 Loader – at the Woolley Fuel Oil Co., Maplewood, N. J.

Single spring balance holds the assembly in operating position, and when loading is completed pre-set spring carries the assembly to any desired angle from 10° to verticle.

Start your fuel oil deliveries with the fast-loading Wheaton Type 680—the *proven* way to save time, maintenance and money. Write today for details.

WHEATON BRASS WORKS, UNION, N. J.
Distributors in all principal cities

Wheaton LOADING ARM ASSEMBLIES

Chappie elected President of Southeastern Wisconsin Group

RAYMOND CHAPPIE, Chappie Oil Co., Milwaukee, has been elected for his second term as president of the Oil Heat Institute of Southeastern Wisconsin. The Institute confines its operations to Milwaukee and surrounding counties and is affiliated with the statewide parent organization, Wisconsin Petroleum Association.

Also elected were: Harold Theisen, Racine, vice-president; Alfred Hegeman, Milwaukee, secretary; Mel Popp, Theinsville, treasurer.

Directors are: Charles Matheny, Kenneth Kaul, Alan Kelling, Edward Umpir and Jack Conger, all Milwaukee; Emery McNeil, Kenosha; Harold Eisen, West Bend; Cal Hartlieb, Allenton; Don Dixon, Waukesha; Jack Wilson, Belgium.

OHILI opens new Headquarters; hears Burroughs at Meeting

NEW HEADQUARTERS at 29 West Marie St., Hicksville, N. Y., were opened on March 3 by the Oil Heat Institute of Long Island.

A ribbon-cutting ceremony highlighted the ceremonies with Nassau County A. Holly Patterson and Commissioner John Burns taking part.

The March 16 meeting of the organization featured an address by Fred S. Burroughs, secretary, National Fueloil Council.

Installing contractors say it is. Wholesalers agree. And ultimate users (the acid test) back both of them up by being completely *satisfied* with TACO Perfecta Pumps!

It's logical. Simplified design makes a Perfecta *naturally* troublefree. For example, there are no seals to leak, wear, or create extra friction. Impeller, rotor and shaft are assembled as a single unit and run in water . . . requires far less power and lubricates itself. It's a completely safe design, too, because rotating parts are completely enclosed. And elimination of couplings is another of the many features that make the Perfecta the first new concept in circulators in over 30 years.

Investigate *all* the advantages of using a Perfecta for your next installation. Complete specifications are available. Write to TACO HEATERS, INCORPORATED, 1160 Cranston Street, Cranston 9, Rhode Island.

Most trouble-free circulator ever designed?

Taco

Model 150 Perfecta Pump
interchangeable flanges.
Available with: ¾", 1", 1¼", or 1½"

SERVING THE HYDRONIC INDUSTRY SINCE 1920

fuel oil & oil heat

Calendar of Coming Events

APRIL

6–8—Florida Petroleum Marketers Association, semi-annual meeting, Hillsboro Hotel, Tampa.

11–12—Virginia Petroleum Jobbers Association, John Marshall Hotel, Richmond, Va.

12–13—Missouri Petroleum Assn., management institute, University of Missouri, Columbia.

13–15—Kansas Oil Men's Assn., management institute, University of Kansas, Lawrence.

13—Virginia Oil Men's Association, semi-annual meeting, John Marshall Hotel, Richmond, Va.

18–20—American Petroleum Institute, Division of Marketing, Fueloil Committee, Homestead, Hot Springs, Va.

18–22—North Carolina Oil Jobbers Association, management institute, University of North Carolina, Chapel Hill, N. C.

20–21—National Petroleum Assn., semi-annual meeting, Sheraton-Cleveland Hotel, Cleveland.

19–20—Michigan Petroleum Association, Detroit-Leland Hotel, Detroit.

27–30—Western Air Conditioning, Heating, Ventilating and Refrigeration Exhibit and Conference, Shrine Exposition Hall, Los Angeles.

MAY

1–3—Northamerican Heating & Airconditioning Wholesalers Association, Roosevelt Hotel, New Orleans, La.

1–3—Tennessee Oil Men's Assn., spring convention, Hotel Claridge, Memphis.

3–5—Middle Atlantic Wholesalers Association, annual meeting, Chalfonte-Haddon Hall, Atlantic City.

3–5—Wisconsin Petroleum Assn., management institute, University of Wisconsin, Madison.

9–11—National Tank Truck Carriers, Inc., annual convention and equipment show, Mark Hopkins Hotel, San Francisco, Calif.

11—Connecticut Petroleum Association, annual convention and trade show, Statler-Hilton, Hartford, Conn.

11-14—Fluid Controls Institute, Inc., spring meeting, The Greenbrier, White Sulphur Springs, W. Va.

15–18—National Oil Jobbers Council, meeting, Statler Hotel, Washington, D. C.

18–20—API Division of Marketing, mid-year meeting, Statler-Hilton, Cleveland.

31–June 5—Fifth World Petroleum Congress, The Coliseum, New York City.

JUNE

5–8—Oil Heat Institute of New England, and New England Fuel Dealers' Association, convention, Wentworth by-the-Sea, Newcastle, N. H.

Honeywell's 'Trade Winds' tells Story of automatic Heating

TRADE WINDS, Minneapolis-Honeywell's magazine for the home heating and airconditioning industry, has made its February number an old-timers issue.

The magazine contains a history of heating from uncontrolled fire to regulated heat written by Bill Nessell. Other articles cover the evolution of the thermostat, a salute to old timers, and the years ahead.

One section is devoted to oilheating tracing the industry's growth from the earliest models. The article starts this way:

"The domestic oilburner is a rugged, durable and dependable piece of heating equipment. When it is installed in a residential furnace or boiler, it gives the home a method of heating that is safe, economical and reliable. It was not always that way.

"Back in the 'roaring 20's' the oilburner was brand new and it literally added much to the roar of that decade in an audible way. The oilburners of that decade were tricky, capricious and temperamental and given to such shenanigans as filling the house with oily soot and blowing the furnace door through the basement wall into the front yard of the neighbor next door."

The magazine is profusely illustrated with photographs and drawings ranging all the way from the most primitive methods of heating to the modern equipment in use today.

Stewart-Hall Chemical Corp. has new Plant and Offices

A NEW PLANT and offices were recently occupied by Stewart-Hall Chemical Corp. in Mount Vernon, N. Y. The new facilities have created additional executive offices, an enlarged advertising and marketing section and a new laboratory.

The company will continue to manufacture fueloil additives, boiler water treatments, cleansers and other compounds for the heating industry.

(*Please turn to page 112*)

Three-quarters of a century of progress in home thermostat design was dramatized with this multi-million dollar engineering and research exhibit visited by 700 outstanding science students from 80 Minneapolis high schools. They were guests of Minneapolis-Honeywell Regulator Co. as part of a two-day special observance of the firm's 75th anniversary. The students viewed 30 exhibits, occupying 30,500 sq. ft. of space in the Minneapolis Auditorium. Mary Lou Jens (left) and Katherine Brown, students at St. Joseph's Academy in St. Paul, listen to Jerry Wicklund, Honeywell engineer, as he traces temperature control from the 1885-vintage "damper flapper" to today's year-round airconditioning control systems.

IT'S NEW... IT'S AMERICAN-STANDARD

Here's why installers will like the new DH Arcoflame Burner

Die-cast aluminum housing is sturdy, yet light. This precision casting assures exact alignment of motor, fan and fuel unit—has neat appearance.

3 mounting arrangements make the burner suitable for every modernization job. DH Arcoflame can be sling-(hanger-) mounted, or furnished with a pedestal or flange.

New Exact-aire adjustment control saves time and trouble. You set the extremely accurate slide adjustment for the air-oil mixture without tools.

4 disk-turbulator combinations cover the complete firing range, making selection simple and keeping inventory low. Firing range: 0.65 - 3.00 gph.

Listed by Underwriters' Laboratories, Inc. and approved by all local authorities. For more information see your American-Standard distributor or write AMERICAN-STANDARD, PLUMBING AND HEATING DIVISION, 40 West 40th Street, New York 18, New York.

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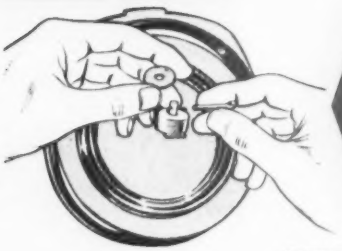
AMERICAN-Standard
PLUMBING AND HEATING DIVISION

IMPROVED *Pre-Balanced* draft regulator



...with NEW *"Pick-off"* vane adjustment!

WALKER
34 (Balanced)
DRAFT REGULATOR

• Even more sensitive and dependable than its famous forerunner, the Type 34, this *improved* model, WALKER BALANCED TYPE 34, is *pre*-balanced — *at the factory* — for perfect sensitivity to draft variations. And the BALANCED 34 *stays* balanced — *permanently!*

The new *"Pick-Off" Draft Adjustment* makes precision setting of the BALANCED 34 as easy as picking up a stack of coins! Just pull out cotter pin (above) and add or remove as many pick-off counterweight discs as needed to set the BALANCED 34 exactly for particular draft conditions. *No moving parts to corrode or jam, so unit is always easy to adjust. The WALKER BALANCED TYPE 34 gives you finer, foulproof adjustment to closer limits over a wider range!*

The BALANCED 34 also boasts handsome, newly designed frame, improved gate stop to soften closure noise, and enclosed knife-edge life-time pivots.

CHECK THESE BALANCED-34 FEATURES:

- Pre-balanced damper for precise equilibrium, maximum sensivity to draft change.
- New "Pick-Off" adjŏstment for fast, fine, foulproof, wide-range setting.
- No moving parts to corrode or jam.
- Enclosed knife-edge pivots for life-long sensitive service.
- Heat- and corrosion-resistant vane of finest aluminized steel.
- Improved vane-stop to soften closure noise.
- Newly designed light, durable aluminum frame.

WRITE TO WALKER NOW at the address below for full details on the new BALANCED 34 and for full catalog of WALKER Draft Control products.

ROYAL PURPLE Regulator for smaller central heating plants

SHUR-FLO Inducer-Regulator for gas, oil and solid-fuel plants

JUNIOR LINE for central heating budget control

TYPE BB commercial and industrial control

DOUBLE SWING for gas-fired equipment

VENTURI CAP for heating and ventilating

WALKER MANUFACTURING AND SALES CORP. 1750 Penn St., St. Joseph, Mo.

NEW PRODUCTS

Snap-out meter Ticket by Printline has built-in remittance Envelope

A SOLUTION to increased paper work is the RediMAILER invoice by Printline. The three-part carbon-interleaved meter ticket provides the customer with a "built-in" pre-addressed remittance envelope. The invoice and payment envelope serves as the customer's bill and no separate statement is necessary.

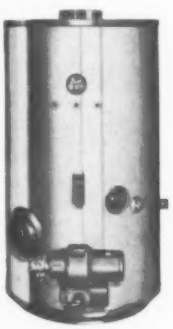
For those companies desiring to office price and mail, the invoice can be sent in a standard window envelope thus assuring privacy of billing.

The invoices are designed to carry the dealer's imprint. The ticket reduces postage expense, provides means for credit control and collection follow-up. It also encourages customer payment immediately after delivery.

Made by: Printline Co., Inc., New York 3, N. Y.

Bock water Heater has 45 gal. Storage and Recovery of 150 gph at 100° Rise

AN OILFIRED, glass lined water heater by Bock (model 150E) has 45 gal. of storage and a recovery of 150 gph at 100° rise is suitable for small commercial or restaurant applications. The Turboflue high capacity heat exchanger makes possible the larger capacity glass lined water heaters.



All heater surfaces are backed with water. This model has extra tappings for thermometer, relief valve and second thermostat. Magnesium rod is standard.

Model 240E has 60 gal. storage, recovery of 240 gph at 100° rise and is suitable as a storage heater for eight to ten apartments or up to 24 motel units. Has large tappings for connecting to an additional storage tank.

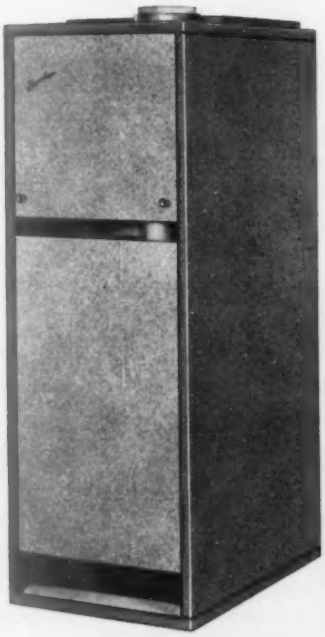
Model 360E has 90 gal. of storage, 360 gph recovery. All three models are glass lined.

Made by: Bock Corp., 110 S. Dickinson St., Madison 3, Wis.

At this sign you'll find dealers who like their furnace profits

For 87 years, Burnham has built with your profits in mind. Advanced engineering design, quality construction and willing service are the Burnham tradition. They help you sell, help you end profit-wasting call-backs, help make every customer recommend you to his friends. You'll be able to price competitively with Burnham, too . . . particularly when you figure the installation savings made with Burnham's exclusive solid steel pan bottom. Protect your profits . . . install Burnham on your next job!

There's a Burnham furnace for every job



COUNTERFLO MODELS
for gas or oil
20-year Guarantee

HIBOY MODELS
for gas or oil
20-year Guarantee

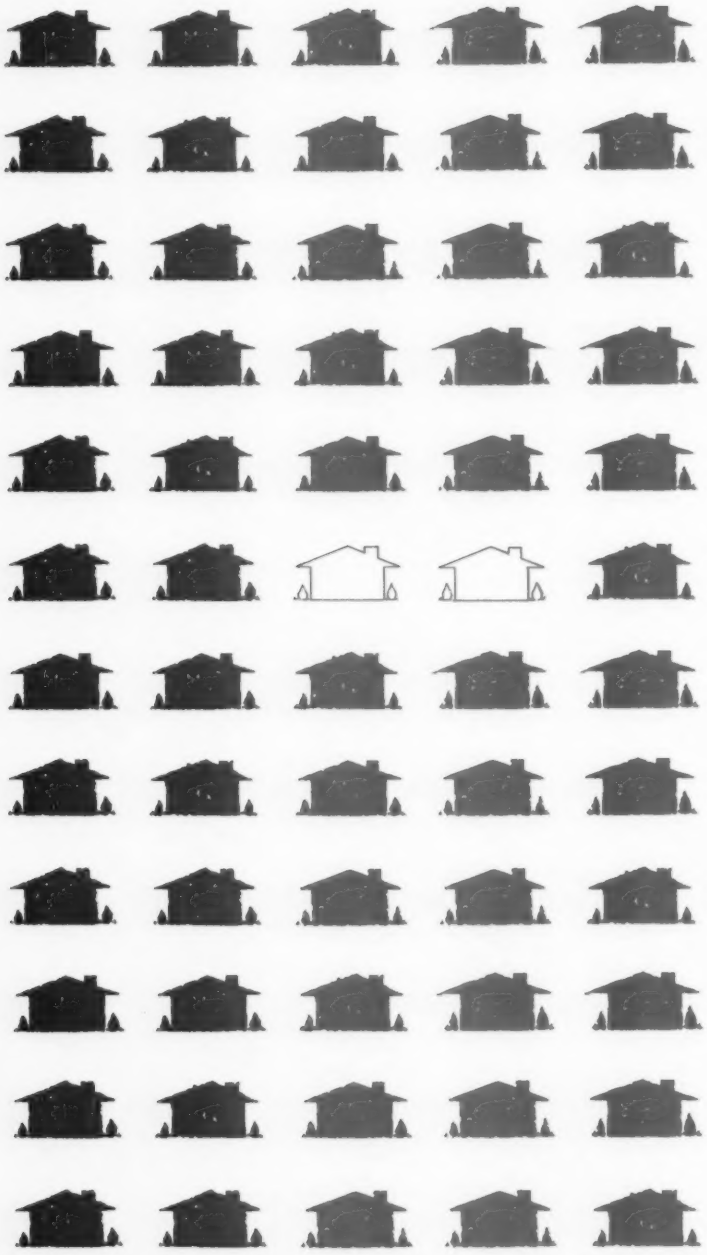
SUMMER COOLING
remote, self-contained and plenum systems
5-year Guarantee

LOBOY MODELS
for gas or oil
20-year Guarantee

Write today for full information on the new Burnham line!

BURNHAM CORPORATION
WARM AIR AND COOLING DIVISION, BELLE VERNON, PA.

BURNHAM CORPORATION, FO-W-40
BELLE VERNON, PA.
Please send me, without obligation, full information on Burnham Winter and Summer Air Conditioners.
Name _____
Address _____
City _____ State _____



You can replace 98% of the oil burner filters in your territory with just four PUROLATOR elements

With a small inventory of just *four* Purolator filter elements, you're set to handle the replacement needs of 98% of the oil burner filters on the market—old ones, new ones, and most of the odd sizes.

Once you've installed a Purolator you're set for a long time. Purolator elements filter finer (down to 0.0005") and longer (they last a year or more without servicing) than any other filter element on the market. With Purolator, you'll be spared the usual emergency calls to replace nozzles that have failed because of abrasive dirt. And a year or more from now, at replacement time, you'll appreciate the way the Purolator element pops out on a spring to make replacement neat and easy.

Purolator has a cross-reference chart that shows you which Purolator elements will fit which brands of oil burner filters. You can get a free copy of the chart by filling in the coupon and sending it to Purolator Products, Inc., Rahway, New Jersey.

Purolator Products, Inc., Dept. 2578
Rahway, New Jersey

Please send me the Purolator Cross Reference Chart showing the correct Purolator filter element for eight major brands of oil burner filters.

*Name*_____

*Company*_____

*Address*_____

*State*_____ *City*_____ *Zone*_____

Filtration For Every Known Fluid

PUROLATOR
PRODUCTS, INC.
RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

NEW WAY TO HEAT WITH OIL

Iron Fireman CUSTOM Mark II *oil firing has every improvement "hoped for" by oil heating dealers*

Heating magazine makes nation-wide study

Deficiencies in present oil firing techniques were sharply brought out when professional heating men were asked, "What improvements would you hope for in oil firing?" Quoted from replies, here are some of the most desired features:

"Eliminate chimneys."

In CUSTOM Mark II firing a small, inexpensive exhaust vent through the roof is all that is needed. (Some local codes still require chimneys).

"We want a device that will stop the loss of heat after the flame is out."

The CUSTOM MARK II traps stored heat in the combustion chamber during "off" periods, reducing costly standby loss to practically nothing.

"We want efficiency at least equal to gas."

The efficiency of CUSTOM Mark II units is as much as 11% *higher* than that of gas units of comparable capacity.

"Anything that would lessen soot formation would be a delight."

CUSTOM Mark II firing, instead of just lessening soot formation, eliminates it entirely by *100% combustion.*

"Eliminate flame pulsation."

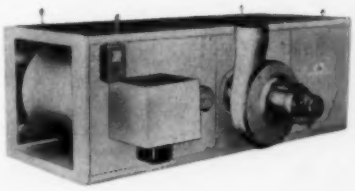
The CUSTOM Mark II combustion system (called VoluMetric Combustion) eliminates pulsation by precision draft control. No natural draft needed; no firebox vents; no barometric damper.

"Eliminate service calls."

While no mechanical equipment is truly service free, the fact remains that the elimination of smoke and soot, and the protection of the oil nozzle against furnace heat, eliminates the *cause* of about 90% of service calls.

Write or wire for full information on CUSTOM Mark II equipment and also on our dealer franchise.

CUSTOM MARK II WARM AIR FURNACE. VoluMetric Combustion creates all conditions needed for total combustion **within the furnace,** without smoke or soot. Flame is clean **from the very instant of ignition,** and **stays clean.** Needs no chimney, simply an exhaust vent. Documented user reports show remarkable savings in fuel and service costs. Models available up to 160,000 Btu/h at bonnet.



CUSTOM MARK II HORIZONTAL FURNACE. Since it needs no chimney (merely an exhaust pipe) this unit can be used in any commercial building—service stations and garages, stores, factories bowling alleys, warehouses. Can be suspended from ceiling with small vent pipe through ceiling or wall. Ideal for many residential applications. Models available up to 250,000 Btu/h at bonnet.

CUSTOM MARK II STEAM OR HOT WATER BOILER. A compact, highly efficient welded steel boiler with the same built-in VoluMetric Combustion system used in the furnaces. Rapid heat transfer and quick pick-up. Standby heat loss is negligible, due to thick fiber glass insulation and sealed combustion chamber. Built to modern industrial boiler standards. Models available up to 145,000 Btu/h.

IRON FIREMAN

HEATING AND AIR CONDITIONING
AIRCRAFT COMPONENTS AND EQUIPMENT
MISSILE AND AIRCRAFT GYROSCOPES
ELECTRONIC EQUIPMENT
CONTROL INSTRUMENTS

Iron Fireman Mfg. Co., 3137 W. 106th St., Cleveland 11, Ohio
(In Canada, 80 Ward St., Toronto)

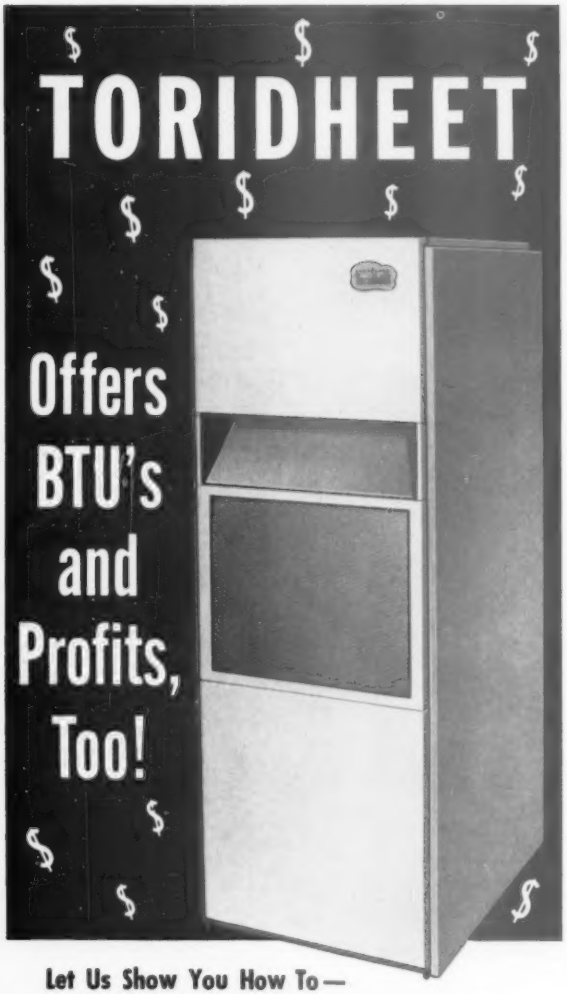
Please send information on CUSTOM Mark II furnaces and boilers, with data on dealer franchise and territories available.

Name _____

Firm _____

Address _____

City _____ State or Prov. _____



Let Us Show You How To—

Sell Ahead of Competition with—

Proven Dynamic Sales Tools

Rugged, Hard-Hitting Co-op Advertising

Organized Sales and Installation Clinics

Factory Assembled and Wired Units

Industry Leaders for 37 Years

Time Tested Engineering and Styling

TORIDHEET Division
Dept. F
Cleveland Steel Products Corporation
16025 Brookpark Road, Cleveland 35, Ohio

Please send me details about your dealer franchise arrangement and about your complete line of TORIDHEET Automatic Heating Equipment.

Name_____

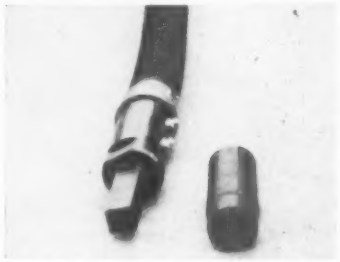
Company_____

Address_____

City_____ Zone_____ State_____

Stow manufactures heavy duty power drive flexible Shafts

TWO NEW extra heavy duty power drive flexible shafts are being marketed by the Stow Mfg. Co. Used on trucks and tractor-trailer for driving the fuel pump from the power take-off shaft, the units come in 1" and 1¼" diameters. They are designed to transmit a great deal of rotary power over any curved path. Heart of the shaft is a heavy duty core made up of layers of tightly wound high-grade music wire. They can be ordered to any length required.



Made by: Stow Mfg. Co., 190 Shear St., Binghamton, N. Y.

Stoddard Industries using new Fabric in Dust-magnet permanent air Filters

A NEW ELECTROSTATIC Polyester plastic fabric, being produced for Stoddard Industries, is being used in Dust-magnet permanent air filters. Called Poly-Mag 80, the fabric provides improved dust pick-up, is unaffected by humidity and temperatures up to 230°F., has a higher resistance to shrinkage and a lower pressure drop.

Dust-magnets are guaranteed for the lifetime of the airconditioner or furnace in which they are used. Available for residential, commercial and industrial use.

Made by: Stoddard Industries, 3383 E. Layton Ave., Cudahy, Wis.

"Well Senator, me an' the folks back home would like the wording changed to: 'Oh say can you see by the dawn's oily light.' "

YOU CAN ENJOY MORE PROFIT...

THROUGH ATLANTIC QUALITY, RESEARCH AND SERVICE

Atlantic Heating Oils mean quality because:

- Atlantic's exclusive triple-refining process assures every Atlantic Distributor and his customers top value in clean, efficient heat.
- Atlantic's continuous research provides vastly improved products to meet growing public needs.
- Atlantic's proven 90-year reputation for refining skill and marketing know-how.

Atlantic services can produce increased efficiency and more sales because:

- Atlantic maintains a proven Distributor Advisory Committee to help with all phases of heating oil sales and distribution.
- Atlantic offers complete training in all aspects of heating oil marketing.
- Atlantic Operations specialists provide expert assistance and guidance in analyzing and solving specific distributor problems.
- Atlantic's personal estate planning helps provide greater future security.

For complete information about convenient supply points and the advantages of an Atlantic Distributorship, call or write The Atlantic Refining Company at the nearest regional office listed below.

ATLANTIC
HEATING OILS

PROVIDENCE, R. I.
430 Hospital Trust Building

SYRACUSE, N. Y.
120 West Genesee Street

PHILADELPHIA, PA.
260 South Broad Street

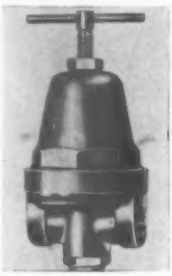
PITTSBURGH, PA.
1100 Chamber of Commerce Bldg.

CHARLOTTE, N. C.
1112 South Boulevard

THE ATLANTIC REFINING COMPANY • *Producer, Refiner and Marketer of Quality Petroleum Products*

Pressure reducing & regulating Valves announced by Cash-Acme

A NEW SERIES of pressure reducing and regulating valves have been introduced by Cash-Acme. Designated the Type A-360 and A-361 series, the valves have a specially balanced internal piston design. Outlet pressures are not affected by wide variations in inlet pressures or variable rates of flow.



The A-360 series has forged brass bodies in the ¼ and ⅜" sizes; the ½" size has an all bronze body. All sizes of the A-361 series are designed for three or four way use having one inlet and three outlets; two inlets and two outlets.

Made by: A. W. Cash Valve Mfg. Corp., Decatur, Ill.

Thermold's insulation Cement avoids Shrinkage and Waste

A ONE-COAT insulation cement by Thermold can be packed by hand, troweled, injected, palmed, sprayed or poured to any thickness without shrinkage. Set or dried material may be re-used. Pre-molded jackets for pipe fittings of any size can be made in two pieces and are easily applied.

Made by: Thermold Products Co., Grandview, Mo.

Make Faster Deliveries Street-side or Curb-side

New HANNAY 2-Way High Capacity Reel

The new Hannay 200 Series reels make street-side or curb-side deliveries with equal ease. These are reels designed especially for flow rates in the 75-100 GPM range, with full-flo 2" I.D. inlet-outlet hubs designed to reduce pressure loss through the reel by up to 58% at 75 GPM. Special frame design with optional ball-bearing rollers permits fast unwinding and rewinding on either side of the truck. Ask your tank truck builder or oil equipment jobber about Hannay 200 Series reels, or write for complete information and catalog.

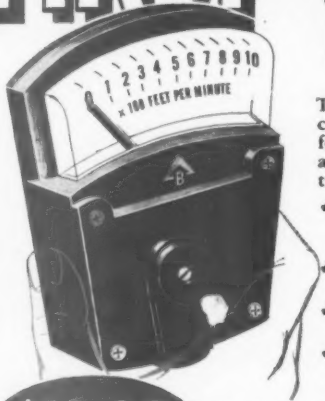
Hose Reels by HANNAY®

CLIFFORD B. HANNAY & SON, INC., WESTERLO 9, N. Y.

FIRST in QUALITY and POPULARITY!

floret

AIR VELOCITY INDICATOR



Takes guesswork out of checking the operation of forced air heating, cooling and ventilating installations. Use it to:

- Check air flow at registers, grilles, diffusers, convectors.
- Spot objectionable air movements in rooms.
- Detect leaks around doors and windows.
- Check air flow in display cases, reach-in refrigerators, walk-in coolers, etc.

$12.90 FACTORY NET

The ideal pocket-size air velocity indicator; direct-reading; can be used for checking air flow through openings as small as ¼" in diameter. Range 0-1000 ft./min. Supplied with pocket case.

BACHARACH INDUSTRIAL INSTRUMENT CO.
200 N. BRADDOCK AVE. • PITTSBURGH 8, PA.

RUSH details on FLORET Air Velocity Indicator to

NAME_____

COMPANY_____

STREET ADDRESS_____

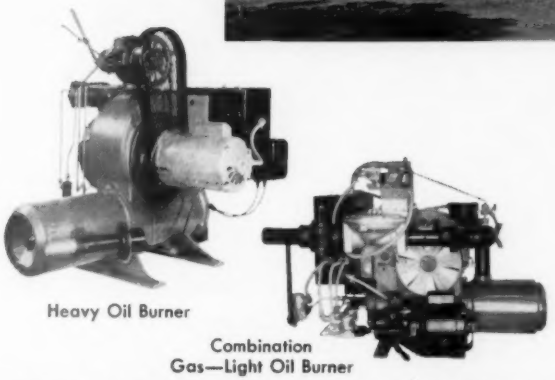
CITY & STATE_____

F-29

Architect:
William A. Stickel
Drexel Hill, Pa.

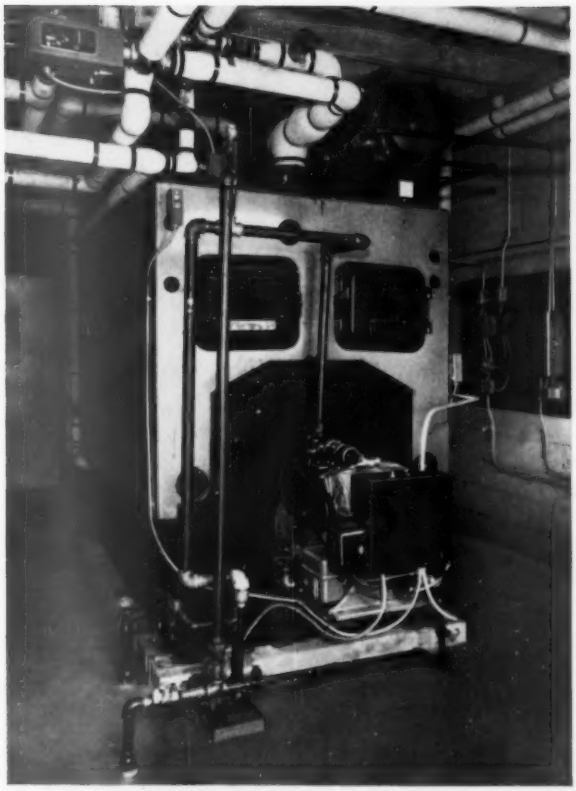
Contractor:
Foley-McManus
Drexel Hill, Pa.

Distributor:
Plumbers Supply Company
Philadelphia, Pa.



Heavy Oil Burner

Combination
Gas—Light Oil Burner



CAST IRON BOILER-BURNER UNITS SELECTED FOR MODERN SCHOOL

The economies possible with heavy oil when efficiently burned dictated the selection of a Weil-McLain ICH Cast Iron Boiler for the Villa Maria Academy, Green Tree, Pa.

These Weil-McLain units are furnished with air atomizing, pressure type burners, completely integrated with electronic controls and factory-engineered combustion chamber design. While primarily designed to burn low-cost No. 5 oil, they will efficiently handle all grades of lighter oils.

ICH heavy oil burners furnish all the air needed for combustion. The accurately metered oil is intimately mixed with air into a highly combustible spray in the nozzle. Burners start with a small flame which gradually builds up to proper size. Safe operation is assured by electronic control.

Available with Combination Gas—Light Oil Burners

Units consist of a power gas burner and a high pressure oil burner, with high efficiency assured by correct metering of air and fuel. For both gas and oil operation, burner starts with small flame and builds up to required size. Electronically controlled...manually or automatically changed from one fuel to another.

Send for Bulletin C-272. For information on other Weil-McLain Gas and Oil Boilers, see Engineers' Product File or Sweet's Architectural File.

WEIL-McLAIN

ICH AND ICL 40 AND 44 BOILER-BURNER UNITS

WEIL-McLAIN
BOILERS · RADIATORS

WEIL-McLAIN COMPANY
MICHIGAN CITY, INDIANA

Address literature requests to Dept. B-40

We Need You!

WE ARE:

Southern Steel & Stove Co., Inc. of Richmond, Va.

OUR COMPANY:

- **HAS BEEN IN BUSINESS SINCE 1857**
- **HAS ABOUT $4,000,000 IN ANNUAL SALES**
- **HAS OVER 300 EMPLOYEES**
- **HAS OPERATED AT A PROFIT EVER SINCE IT WAS ORGANIZED**

We are ready to market

"CAMERON/HYDRONIC"

1. A new line of oil and gas home heating "boilers", revolutionary in concept, incomparably compact, of guaranteed quality and competitively priced. The efficiency of these units was tested and proved in almost 1,000 homes before we were ready to offer them to the public.
2. A startlingly unique form of hydronic baseboard . . . called "CAMBOARD" . . . only ⅝" thick! It is almost invisible in a home, yet generates unrivaled hydronic-radiant heating comfort, with no slots, fins, cast iron, or holes. It costs about $1.00 a lineal foot.
3. A complete hydronic package (including the first efficient air trap-flow control valve on the market.) As a package, the "CAMERON/HYDRONIC" low initial price makes the comfort and economy of radiant heat available to all sizes of residences.

WE NEED:

A reputable, knowledgeable commission sales representative in each area of the country.

. . . Exclusive area distributors, of highest repute for stability, ethical operation and merchandising experience. In each area one major plumbing and heating wholesaler and/or one major fuel oil marketer will be appointed. Distributors activities will be backed by company sponsored local newspaper, T.V. and radio promotion as well as national media advertising.

WRITE OR TELEPHONE:

MR. PATRICK HART, *Vice President*

SOUTHERN STEEL & STOVE CO.
INCORPORATED

6th & DINWIDDIE STS. RICHMOND 24, VA.
BEImont 3-6981

Anderson thermostatic steam Trap with built-in Union reduces Costs

A QUIK-FLEX industrial thermostatic steam trap has a union incorporated into the trap which reduces initial cost as well as maintenance. The trap can be disconnected by loosening a single fitting. The built-in union feature is available in both ½ and ¾" sizes. A downward flow design with no retaining cores or passages prevents condensate from cooling and freezing in the trap. A removable cap of forged steam bronze or cast semi-steel permits easy access to the interior. The valve is both tapered and guided to provide positive leak-proof seating. It is made of Anderloy, a special alloy developed with corrosion and scoring resistance.

The traps can discharge up to 31,000 pounds of condensate per hour, and are suitable for pressures up to 250 psi.

Made by: V. D. Anderson Co., 1935 W. 96th St., Cleveland 2, O.

WHISTLER

Model E, the only whistle you can install without disturbing the present piping. Model D for new installations.

APPLIED MECHANICS COMPANY
381-389 CONGRESS ST., BOSTON 10, MASS.

OWNERS AGREE: A '60 CHEVY IS WORTH MORE BECAUSE IT WORKS MORE!

"BUMPS AND POTHOLES DON'T BOTHER THIS NEW CHEVY AT ALL. I CAN TRAVEL FASTER AND GET MORE DONE."

When the Royal Oak, Michigan, office of Webb Fuel Company purchased a 1960 Series 60 Viking for fuel oil delivery in the suburbs, it was assigned to driver Norman Shumacher. After driving it for three months Norm says, "I wouldn't trade it for anything else on the road. Bumps and potholes don't bother this new Chevy at all. I can travel faster and get more done—drive along a rough country road at 40 to 50 miles an hour and hardly feel the bumps. In fact, I feel fresher after 8 hours in my new Chevy than I did after 4 in my old truck!"

■ They're speaking right up, these owners of '60 Chevrolets, talking about a new truck-and-tire-saving ride that leads to shorter trip times, too. Chevy's independently suspended front wheels step right over bumps, virtually eliminate most of the severe impacts that can wear out trucks and tires before their time. You profit by a big savings on maintenance; get a bigger daily work output because these trucks float you over rough roads with fewer slowdowns. New Chevy cabs are built to last longer, boost driver efficiency. There's more leg, head and hip room; new visibility that's greater by 26%, new foam-padded seat, new tougher construction features—double-panel roof, box-section door pillars and many more. Efficient power that knows the most about saving money. There's the 261-cu.-in. Jobmaster 6—a truck-built 150-h.p. power plant that does more work per dollar with tough, time-proved components, or a *wide* range of efficient short-stroke V8's. Look into it for yourself; Chevy's totally new working ability is at your dealer's right now.... Chevrolet Division of General Motors, Detroit 2, Michigan.

1960 CHEVROLET STURDI-BILT TRUCKS

CHEVROLET

Roberts-Gordon

announces

A COMPLETE LINE OF OIL-FIRED BOILERS

"One for EVERY Home Heating Job"

ROBERTS-GORDON BOILERS offer all of the exclusive features necessary for ready customer acceptance. *Lifetime cast iron* boiler sections assure trouble free, low cost heating. "Wet base" construction maintains clean prime heat transfer surface for maximum heat transfer, minimum fuel consumption — a sure-fire sales point. All boilers are constructed in accordance with ASME and IBR Code requirements.

- SERIES 2GO HOT WATER AND STEAM BOILERS are specifically designed for hot water and steam service. Shipped complete with refractory combustion chamber. Tankless hot water heating coils available, if desired. 5 sizes in either hot water or steam from 113,000 to 252,000 BTU/Hr. output.
- SERIES GWO OIL-FIRED HOT WATER BOILER, with exclusive self-cleaning water tube construction. 4 sizes from 111,000 to 180,000 BTU/Hr. output. Hot water coils optional in larger sizes.
- FACTORY ASSEMBLED HOT WATER BOILERS, SERIES GWOA — shipped as a complete package, ready to install. Compact design. 4 sizes — 111,000 to 180,000 BTU/Hr. output. Hot water coils optional in larger sizes.

Investigate this complete line of nationally advertised, top profit, heating equipment today. Write today for your free copy of the new Roberts-Gordon catalog. Remember, Roberts-Gordon has just the right unit for your customers' requirements.

ROBERTS-GORDON APPLIANCE CORPORATION

ROBERTS-GORDON APPLIANCE CORP.
44 Central Ave., Dept. FL, Buffalo 6, N. Y.

Please send me full details on your complete line of Roberts-Gordon Boilers.

NAME_____

TITLE_____ COMPANY_____

ADDRESS_____ CITY_____ ZONE____ STATE____

Johns-Manville makes radiant Ceiling for Heating, Cooling, sound Control

SANACOUSTIC HCS System for radiant heating, cooling and sound-conditioning is being released for national distribution by Johns-Manville Corp. Made of standard components, it is easy to install and economical to maintain. Because the heating and cooling is in the ceiling, more floor space is available for greater flexibility.

Basic components of the system are: water-carrying coils; a sound-absorbing insulating blanket; perforated metal panels which form the finished ceiling.

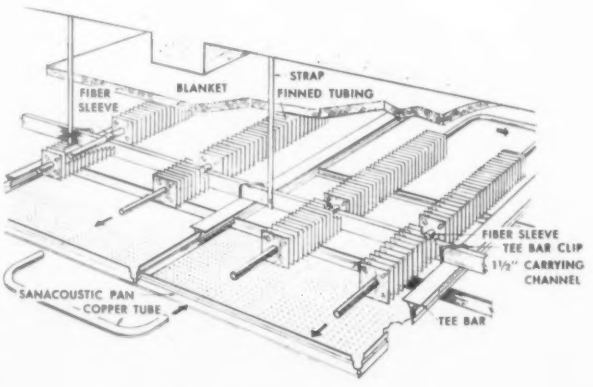
Circulating warm water inside the HCS tubing provides heat which is radiated to the steel panels and then downward. In cooling, excess heat from room surfaces and occupants is radiated to the ceiling surface and carried away by cool water circulating in the same coils. Temperature of the water is controlled to prevent condensation.

The ceiling may be installed for heating only with later adaptations for cooling. Controls may be of the zone or individual room type.

Maintenance is simplified because there are no moving parts in occupied space. The metal panels snap into place and can be unsnapped to provide complete accessibility at any time or any place in the system.

All HCS systems are installed under the responsibility of Johns-Manville.

Made by: Johns-Manville Corp., 22 E. 40th St., New York 16, N. Y.



Shell "Certified Comfort"
–the profit plan for fuel oil distributors

"Certified Comfort" is Shell's tried and proved program for building year-round volume and profits for fuel oil distributors. It has been skillfully designed to benefit both customer and dealer. Here's how it works:

1. Customer gets steady, efficient heating with Shell's super-refined oil, the modern fuel.

2. Special additives in Shell's premium-quality heating oil keep fuel filters clean.

3. Customer pays no more than for ordinary heating oil.

4. Customer is assured of premium service . . . including degree-day system deliveries, anti-corrosion treatment of fuel tanks and metered delivery receipts.

5. *For you,* a full-scale cooperative advertising program makes use of television, radio, billboards, newspapers and direct mail. Available to all distributors of Shell Heating Oils upon request.

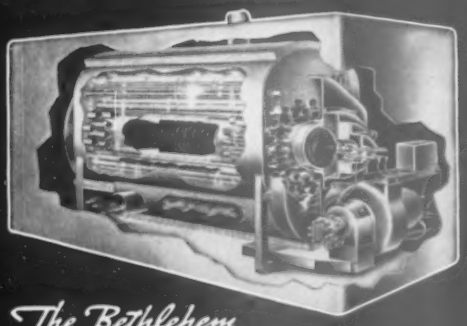
Now's a good time for you to contact your local Shell representative. You'll get full details. And remember, the "Certified Comfort" Plan is the Profit Plan for Shell Fuel Oil distributors only.

SHELL OIL COMPANY

CERTIFIED COMFORT SHELL HEATING OILS

fueloil & oilheat

the
inside story
on top sales



The Bethlehem
DYNATHERM

Exclusive "Whirling Flame" saves 40% on fuel bills!

Let's face it—maximum customer satisfaction means maximum profits. And customers are getting *even more than they expect* from the Dynatherm heating plant . . .

- Pays for itself in five years through fuel bill savings!
- Gallons of instantaneous hot water . . . year 'round!
- Welded steel construction for durability and rapid response.
- Factory-assembled and tested for minimum installation cost.
- Horizontal duotone baked enamel cabinet . . . attractive, space-saving.

Bethlehem Dynatherm SAVES money for your customers . . . MAKES money for you

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA, U. S. A.

Automatic changeover Control is new Addition to Penn Line

DESIGNATED the Type 426X, a new Penn control fills the need for an automatic changeover device for use with combination heating and cooling thermostats. Control feels coil water temperature and automatically selects the correct thermostat function. It is recommended wherever an accurate surface mounted temperature element is required.

The surface mounting plate is a liquid filled sensing element providing fast response to change in liquid temperature. Single pole, double throw silver contacts are enclosed in a tamper-proof, dust-tight enclosure. Range of control is 60° to 90°F. with fixed differential of approximately 10°F.

Made by: Penn Controls, Inc., Goshen, Ind.

Visgage Tester is pocket-sized; will spot check oil Viscosity

TESTING MACHINES, INC., offers a pocket type viscosity comparator for quick, on the spot checking of oil viscosities. Only a half ounce of oil is needed for a test. The nozzle of the tester is inserted into the oil to be tested, a small amount withdrawn, and the reading obtained in a few seconds. It can be used indoors or outdoors in any temperature.

Made by: Testing Machines, Inc., 72 Jericho Turnpike, Mineola, N. Y.

Perfection remote Airconditioners are available in 2 to 5 hp Models

THE 1960 Perfection remote airconditioning systems are built to fit any kind of existing furnace. Four different coil shapes provide custom design features with standard units. If the furnace doesn't have enough air moving capacity, an air handler unit is available that can be fitted with the cooling coil right in the duct to give the extra boost needed. Available in 2, 3, 4 and 5 hp units, the remote condensers are weather-proofed units with steel components.

Made by: Perfection Division, Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio.

ANOTHER WAY RCA SERVES BUSINESS THROUGH ELECTRONICS

It's what's inside RCA's Transistorized "LD" Radio that makes it your greatest value!

Take a look inside the new RCA 2-Way Radio and you'll see an array of advanced improvements that give you new economy, dependability and performance.

Sensibly designed with you in mind, the "LD"* employs standard transistors only in circuits where long experience proves their reliability . . . where they can do the best job of cutting down on costly battery drain. You get maximum profit-earning "on air" time, too, because circuits are "Road Map" coded for fast, sure servicing guidance.

You'll like the extra measure of dependability you get with Security Sealed Circuits assuring top performance under the most rugged operating conditions. And you'll cheer the "LD's" booming voice—thanks to a powerful five watts of audio.

Priced considerably lower than other transistorized 2-way radio equipment—comparable in cost to conventional tube-type radios—the "LD" is your greatest value.

So if it's economy, dependability and performance you want in 2-way radio—if you are looking for a way to improve the efficiency of your operation—get the whole *RCA* story, right away.

Your RCA Representative will be glad to explain further why RCA "LD"
**(Low Drain) equipment is today's best buy in 2-Way Radio. Or for complete descriptive literature — write RCA, Dept. F-252, Bldg. 15-1, Camden, N. J.*

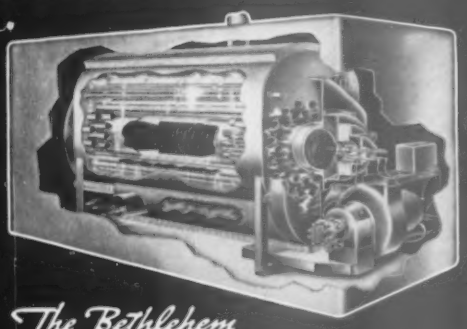
RCA Tmk(s) ®

RADIO CORPORATION of AMERICA

COMMUNICATIONS DIVISION • CAMDEN, N. J.

fuel oil & oilheat

the
inside story
on top sales



The Bethlehem
DYNATHERM

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RCA Tmk(s) ®

RADIO CORPORATION of AMERICA

COMMUNICATIONS DIVISION • CAMDEN, N. J.

fueloil & oilheat

"Our '59 Fords have logged over 80,000 trouble-free

miles with only routine, ICC-prescribed maintenance"

says Ed Seaton, Jr.
President
Refiners Transport, Inc.
Nashville, Tennessee

Refiners Transport, Inc., one of the South's leading common carriers, is licensed to haul liquid commodities in seventeen states. This progressive company leases its tractors from independent contractors and has always had more Fords in its fleet of tractors than any other make. Here is what Mr. Seaton has to say about them:

"In the 10 years we've been in business, we have had more satisfactory service out of Fords than any other vehicle in the same price class. They just don't require the repairs that other makes do and the '59 Ford F-1000 tractors seem to be the best yet. We haven't experienced any downtime with them and a couple have logged over 80,000 miles with no repair work on them other than our regular ICC-prescribed maintenance.

"The majority of our independent contractors drive their own tractors, and the ones on the shorter hauls buy Fords with the Big V-8 because they outperform everything else on the grades. With a Ford, they don't have to run the engine as fast to maintain legal road speeds and there is ample power for good acceleration. In fact, the men with the F-1000's say they haven't seen anything yet with a comparable gross that they couldn't pass. The lighter chassis weight of a Ford frequently means as much as 300 gallons more payload, too!"

Again in '60 FORD TRUCKS *offer Certified Savings!*

CERTIFIED ECONOMY

This year, if you buy a Ford Truck, you get a truck with certified economy in the three major expense items: gasoline, tires and initial price.

Best Gas Mileage! Results of second running of Economy Showdown U.S.A., show 1960 Ford ½-ton Pickups won every test—beat the average of the other four leading makes by 13.1%.

Double Tire Life! Under average conditions, Ford's truck-type front suspension gives double the front tire life of that obtained with "soft-type" independent system used on some 1960 trucks.

Lowest Prices!* New 1960 Ford ½-tonners are priced from $33 to $181 below those of leading competitive makes. List prices of Ford Light and Medium Duty models are lowest in their class.

CERTIFIED DURABILITY

The refinements built into the '60 Ford Heavy and Super Duty Trucks for longer life and greater reliability will also bring savings to your operation.

Automatic Radiator Shutters, standard on all Super Duty models, add considerably to engine life . . . mean less expansion and contraction, more efficient combustion and better lubrication.

Dynamometer Tests of Ford's submerged-type electric fuel pump showed no power loss at temperatures up to 200° F vs. 9% loss with mechanical fuel pump under the same conditions.

Shaker Table Tests plus constant exposure to oil, water and heat proved Ford's 1960 wiring harness to be three times longer lived than the 1959 harness.

CERTIFIED ECONOMY REPORTS

Certified results of these and other tests conducted by America's leading automotive research organization, plus a comparison of manufacturers' suggested list prices, are now available at your Ford Dealer's. Take him up on his offer to check the records . . . see and drive the new Ford Trucks . . . *and you'll save for sure!*

*Based on latest available manufacturers' suggested retail prices, including Federal excise tax, excluding dealer preparation and conditioning and destination charges

FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . BUILT TO LAST LONGER, TOO!

let your customers dial you COOL PROFITS...

CENTRAL AIR CONDITIONING

Only ROUND OAK Gives You Such A Complete Range of Sizes to Meet Every Air Conditioning Need

The concept of Central Air Conditioning is gaining ground fast. How much of this growing market you get will depend on the performance of the equipment you sell. Round Oak Central Air Conditioning puts performance first, giving you extra cooling capacity, a big extra margin of rugged dependability and the total customer satisfaction that means extra sales to you! Round Oak also offers you the Clima Pump, the all new, all electric heat pump plus a complete line of furnaces for oil, gas and coal from 65,000 to 1,000,000 BTU. Write today for all the facts. There is no obligation.

ROUND OAK COMPANY
DIVISION OF PEERLESS CORP.
DOWAGIAC, MICHIGAN
Manufacturers of quality Furnaces, Central Air Conditioning and Electric Clima-Pumps.

New Line of electronic air Cleaners introduced for home Installations

ELECTRO-AIR CLEANER CO. has introduced a line of electronic air cleaners for installation in homes and smaller commercial and industrial buildings. The new units were made possible by reducing ionizing-collecting cell plate spacing. Units require less space. Models are available in 26 models, both horizontal and vertical air flow, from 800 to 10,000 cfm capacity.

Made by: Electro-air Cleaner Co., Inc., Olivia and Sproul Streets, McKees Rocks, Pa.

Motorola announces further Expansion of transistorized two-way radio Line

THE INTRODUCTION of a 100-watt two-way radio to operate in the low band (25-54 mc) frequencies gives Motorola a complete line of units in both low and high band (144-174 mc). Like the other models, the new unit will accommodate either positive or negative battery ground polarity. Transistors have replaced the vibrators and dynamotors in the radio's power supply and all tubes in the receiver.

Low battery drain enables operation of the radio when the vehicle is parted without idling the engine to keep the battery charged.

Housing for the new and old MOTRAC radios are interchangeable.

Made by: Motorola, Inc., 4501 W. Augusta Blvd., Chicago 51, Ill.

"Well, I've tried coal, then gas, then oil—but you know what I found to be most effective?"

ANOTHER DIAMOND JUBILEE EVENT

Use your professional skill in HONEYWELL'S BIG WIN-A-WAGON CONTEST!

FLASH! The Honeywell Flame safeguard has now completed 193,688 cycles in the torture-test—equivalent to 13 years of operation!

Here's a real "stopper" of a car! This promotion-minded automobile is guaranteed to stimulate customer interest in your business! But whether promoting business or motoring the children, you'll find the "Merry Olds" to be the most unique innovation in motor car travel in half a century!

You may win this authentic reproduction of a 1901 Olds—or one of ten Heiland Reflex Cameras!

To be eligible to win, simply estimate how many cycles Honeywell's new flame safeguard will make under rugged torture-testing. At press time, the safeguard has completed 186,035 cycles and is still going strong! Then, submit your estimate on a post card along with your name, title, company and address. Kindly tell us whether you're an O.E.M., distributor, dealer (installer or serviceman) or a consulting engineer, and whether your prime interest is burners or boilers. Send your entry to Minneapolis-Honeywell, Dept. FH-4-40, Minneapolis 8, Minnesota.

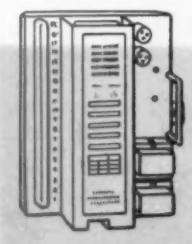
- **FOUR RUGGED SILICON** diodes provide rugged construction
- **50% FEWER TUBES** in protective tube shields
- **SIMPLIFIED ELECTRONIC** timing
- **NEW ARMORED BACK** resists corrosion
- **FITS SAME MOUNTING CABINET** as former model

Honeywell's new R478 Protectorelay* offers unmatched flexibility in a flame safeguard! Never before has one flame safeguard offered you so many applications and performance advantages: electronic flame detection, unparalleled sequencing flexibility, convenient voltage flexibility, simplified electronic timing and many other features!

*Trademark

Honeywell

First in Control



Matched control system for power gas burner

C283—Flame Detector

V495—Pilot Gas Valve

V4604—Gas Valve

M804E—Modulating Motor

C645—Pressure Switch

L404—Pressurestat—High Limit

L91—Modulating Pressurestat

New V4621 Oil Valve

New C7012A Ultra-Violet Flame Detector

Airtemp makes Appointments in marketing Departments

ARTHUR L. FOSTER has been appointed advertising manager of Airtemp Division, Chrysler Corp., Dayton, O.

Several additional appointments have been made by the company both at the home office and at the regional level. Harry P. Young is now manager of sales planning, residential products.

An expanded sales promotion department now includes Lee Epley as manager, Carl Miller, advertising and production supervisor, and copywriters, C. Philip Skardon and John F. Zaino.

The new manager of sales planning, room airconditioners, is Robert W. Forster, and Henley M. Hilburn is business and market research manager.

At the regional level, Airtemp has named George A. Godfrey as district manager of the Chicago area and Del Robson will have the same position in the Kansas City area. In Atlanta, Ga., Hascal Simmons is the branch manager and Donald C. Degen, sales engineer.

J. G. Jordan (second from right), Shell Oil's marketing vice-president is surrounded by presidents—three Shell jobbers and all presidents of local organizations. Left to right they are: Paul Brown, Independent Oil Co., St. Louis, president of The Oil Men's Club of Greater St. Louis; Paul Finck, The Paul Finck Oil Co., Union, Mo., president of the Missouri Petroleum Association; Rudolph Bretsnyder, Porter Oil Refining Co., St. Louis, and president, OHI of St. Louis. Picture was taken during Missouri Petroleum Assn. meeting in St. Louis recently.

Survey of distributor Costs available from Lexington Corp.

FREE COPIES of a survey covering the costs of running a fueloil business are available from Lexington Corp., 10 Milk Street, Boston 8, Mass.

Lexington is a wholly-owned subsidiary of James Talcott, Inc., which specializes in making accounts receivable loans to heating oil distributors in the New England area.

Gorman-Rupp presents Data on fueloil handling Pumps

A PRESENTATION on fueloil handling pumps and procedures was made on February 17 at the Waldorf-Astoria Hotel, New York, by The Gorman-Rupp Co., Mansfield, Ohio. The session concluded a two-day meeting sponsored by the company; the first day was devoted to the general topic of fueling pumps.

A team headed by Warren E. Rupp, vice-president and director of engineering, discussed "Efficient fueloil Pumping." James Gorman, sales manager, introduced the subject with the observation that bulk plant pumping had moved up to the 800 gpm plus class and home delivery rates of 100 gpm now were common.

Dick Fraser, district representative in the New York area, outlined the features of the O2F3 pump, emphasizing its replaceable seal which can be done without disturbing piping or power take-off. Gil Stahl presented the facts about Gorman-Rupp bulk plant pumps.

Warren Rupp delineated design features of the pump line and described available accessories, designed to facilitate installation and use on fueloil trucks.

Add a "HANDYMAN" to your furnace cleaning crew for bigger profits!

The NEW, MODERN SPACE-SAVING GENERAL HANDYMAN POWERVAC FURNACE CLEANER

Check all these "HANDYMAN" exclusive features:

- SPACE-SAVING MODERN DESIGN
- ONE MAN OPERATION
- SELF CLEANING FILTER BAGS
- FAST ALL WEATHER OPERATION
- LOW MAINTENANCE
- 75 Cu. Ft. SOOT HOPPER
- CONVENIENT HOSE STORAGE
- 2 EASY-TO-REACH TOOL BOXES

Get your share of the profitable furnace cleaning business with a minimum investment that insures big returns. The General "HANDYMAN" Furnace Cleaner is built with more power (up to 40 H.P.) and greater capacity than any other cleaner available today. Now... All residential, commercial, institutional and industrial heating system cleaning jobs can be done with ease at a maximum profit.

Investigate all the features and advantages of the General "HANDYMAN" Powervac Furnace Cleaner before you buy furnace cleaning equipment for your shop. Send for our *Profit Portfolio* with complete information and prices on the "HANDYMAN" and other General Furnace Cleaners. Do it now . . . and start profits rolling your way from more cleaning jobs, more repair jobs and more replacement part sales for a profitable 1959.

Phone, Wire or Write Today
INdependence 3-5127

Wm. W. Meyer & Sons
8260 Elmwood Ave., Skokie, Illinois

C.A.C. ALONE IS NOT ENOUGH!

This is warm air heating's toughest comfort problem: A furnace sized to heat a home comfortably during coldest weather has much more capacity than it needs for about 90% of the winter. With an ordinary furnace, this causes on-off blower operation, and poor comfort conditions during much of the winter. Adjusting the system for C. A. C. (Continuous Air Circulation) helps. But with C. A. C. the air coming from the registers feels cool much of the time because it's always delivered at the same velocity, regardless of its temperature.

PERFECTION ELECTRO-MAGIC REGULAIRE®

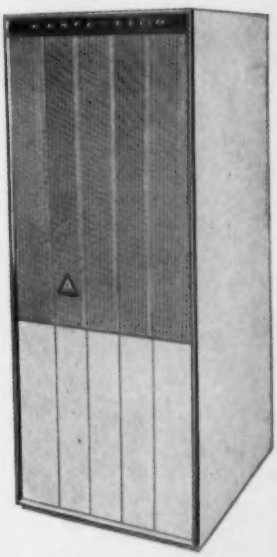
ASSURES YOUR CUSTOMERS COMPLETE COMFORT

PERFECTION ELECTRO-MAGIC REGULAIRE adjusts the velocity of the warm air according to its temperature, by means of an ingenious, electrically controlled vane in the outlet of the blower. Here's how it works:

CLOSED — When the blower first comes on, the vane is closed. In this position it permits only a gentle stirring of warmth through the ducts. Any cool air in the ducts is gradually pushed out — not blasted out at full velocity to chill anyone close to a register.

PARTLY OPEN — As the temperature of the air in the furnace increases, the blower vane is gradually opened, by an electrically-actuated heat-sensitive coil. Thus air velocity is increased as its temperature goes up. A gentle flow of warmth blends with the air in the living area. In mild weather, the vane is in this partly opened position a large percentage of the time. Thus the blower provides longer periods of comfortable air circulation, with no "chilly" feeling brought on by high air velocity.

FULLY OPEN — Only when the furnace is delivering its full capacity does the vane open completely — when the air is fully warmed, ready for delivery at full velocity, to maintain complete comfort in the coldest weather.



World's Fair Styled Perfection Regulaire Furnace — looks good enough to install anywhere in any house.

ELECTRO-MAGIC REGULAIRE is a patented Perfection feature, available only on Perfection Regulaire Furnaces. If you want your customers to enjoy the finest heating comfort available anywhere, be a PERFECTIONIST — pass up the ordinary furnaces and install PERFECTION REGULAIRE. See your Perfection distributor today. If you don't know him, write to us for his name.

BE A PERFECTIONIST!

See your Perfection distributor for the new idea-packed booklet, "How to become a Perfectionist." Or write to us for a copy.

PERFECTION DIVISION

HUPP CORPORATION

CLEVELAND 10, OHIO

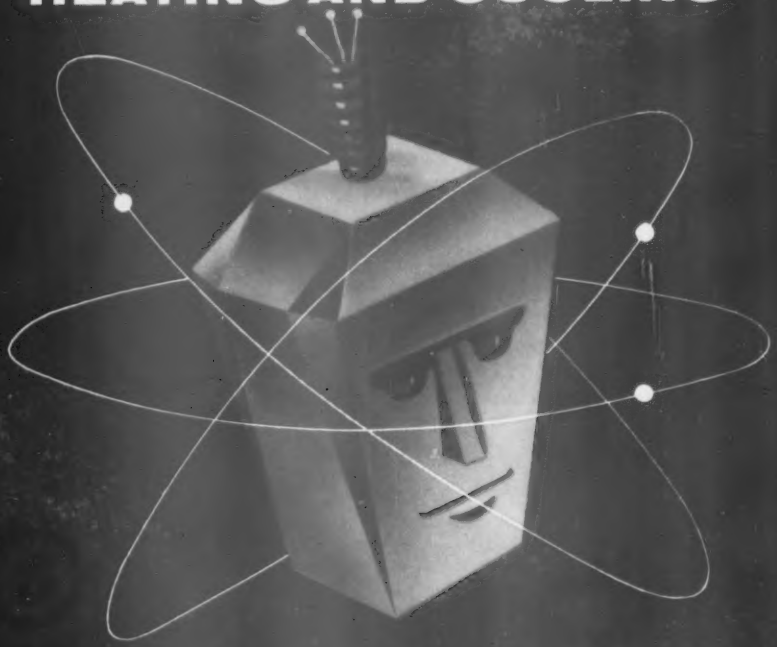
A complete line of oil, gas and electric warm air furnaces; air cooled air conditioners and heat pumps.

Detroit Oilheat

WILLIAMSON

"Magic Brain"

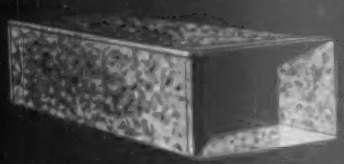
HEATING AND COOLING



....works "Magic" for your sales!

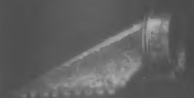
*Seal-Tite** DUCT, PIPE & FITTINGS

AIR



K. D. Rectangular Duct

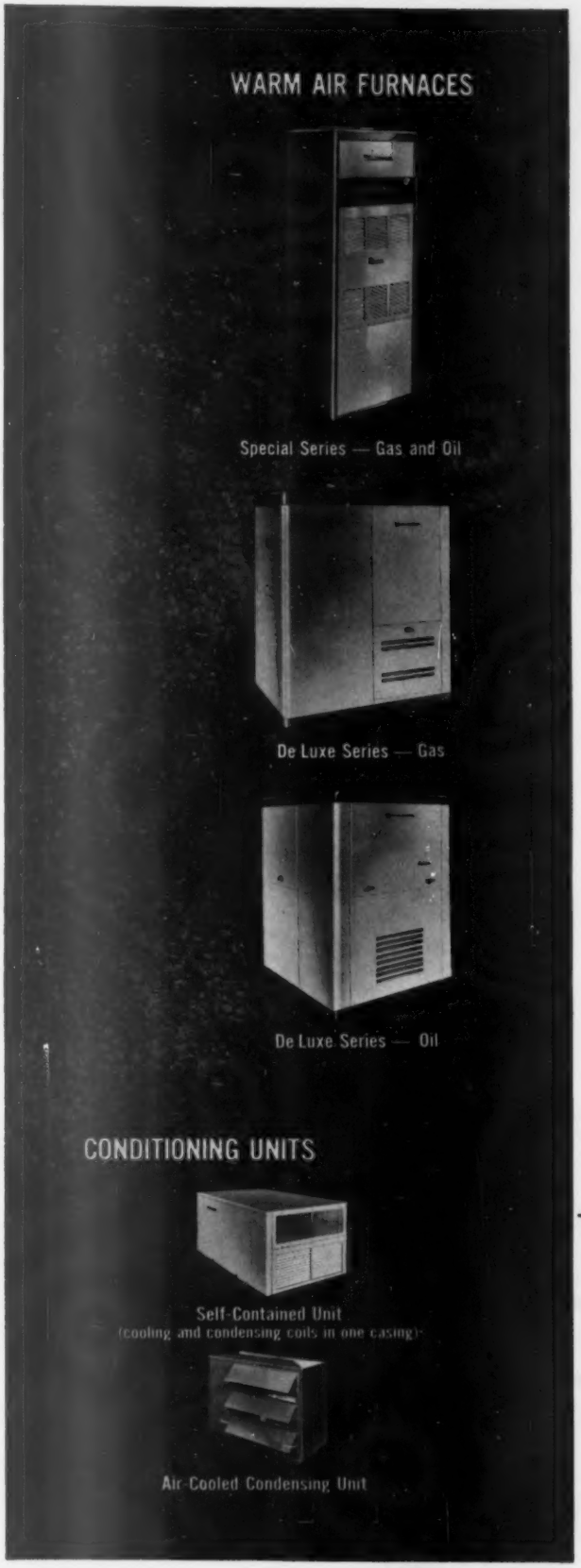
Adjustable Elbow



Top Take-Off

Snap-Lock Round Pipe

Space Console Unit


WARM AIR FURNACES
Special Series — Gas and Oil
De Luxe Series — Gas
De Luxe Series — Oil
CONDITIONING UNITS
Self-Contained Unit
(cooling and condensing coils in one casing)
Air-Cooled Condensing Unit

THE INDUSTRY'S MOST COMPLETE LINE and THE INDUSTRY'S MOST UNIQUE SYMBOL

will help you make more heating and cooling sales

WARM AIR FURNACES . . . to fit any price range for the home owner or the builder.

AIR CONDITIONING UNITS . . . to fit practically any residential or light commercial need.

*Seal-Tite** **DUCT, PIPE AND FITTINGS** . . . to assure complete "magic comfort" with "Magic Brain" equipment!

NATIONALLY ADVERTISED to home owners and builders. Complete assortment of free literature, brochures, sales aids and tested selling plans.

HEATS AND COOLS
AMERICA'S HOMES

Copyright 1959, The Williamson Co. * T.M. Pat. Pend.

THE WILLIAMSON COMPANY
3312-R-4 Madison Road • Cincinnati 9, Ohio

Gentlemen:
Rush me information on your "MAGIC BRAIN" line of:
____Heating Equipment ____Cooling Equipment
____"Seal-Tite" Duct, Pipe & Fittings

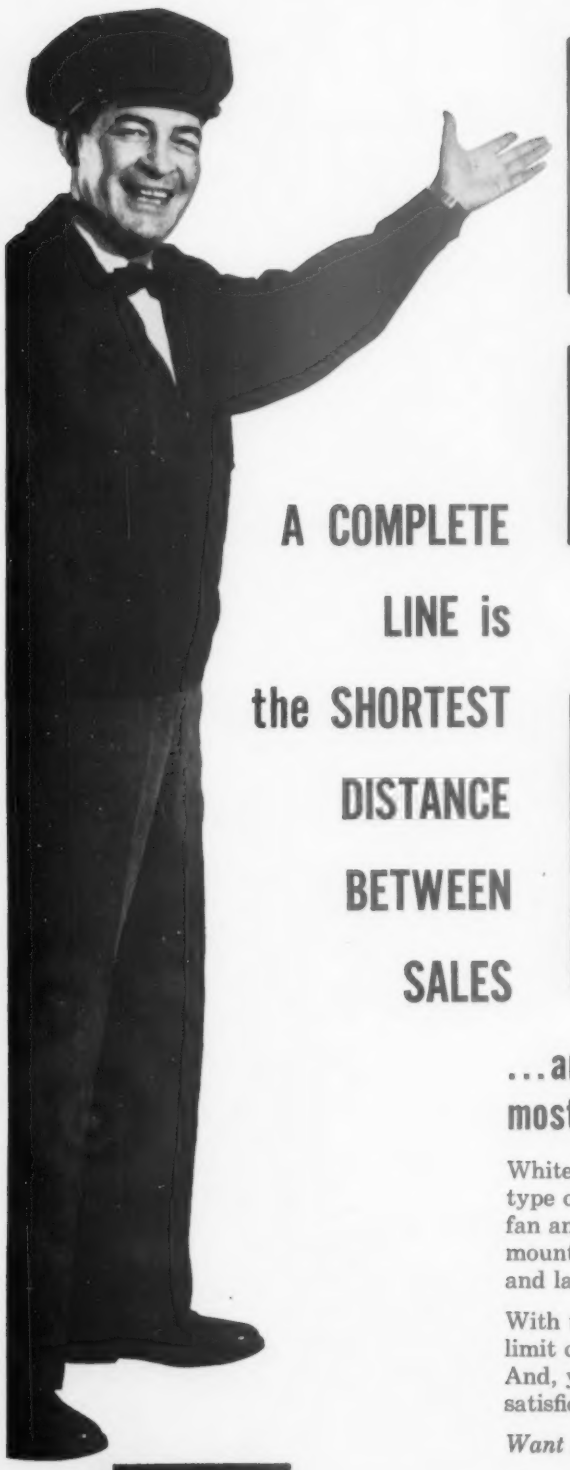
Name_____Title_____

Firm_____

Address_____

City_____Zone____State_____

Fuel oil & oil heat



CUSTOMline ACE
Single insertion—
designed for narrow spaces

CUSTOMline DEUCE
Dual elements for
shallow insertions

HYDRAULIC-ACTION
Two controls in one
unit—finest fan and
limit available

A COMPLETE LINE is the SHORTEST DISTANCE BETWEEN SALES

...and White-Rodgers gives you the most complete line of Fan & Limit Controls

White-Rodgers makes a fan and limit control to fit every type of furnace... and in every price range. White-Rodgers fan and limit controls are accurate and rugged. They mount interchangeably with other makes... go on in minutes and last for years.

With the complete line of White-Rodgers *quality* fan and limit controls on hand you are ready to handle any job. And, you never have costly "call-backs" . . . always have satisfied customers.

Want more information? Write for Folder R-1630.

WR

WHITE-RODGERS

St. Louis 6, Missouri
1209 Cass Avenue

Toronto 9, Canada
611 Gerrard St. East

Basel, Switzerland
Münchensteinerstrasse 2

A DOUBLE-PROFIT PAIR...

BECAUSE EXCLUSIVE FEATURES COMMAND A PRICE WHICH BRINGS A PROFIT...AND BUILT-IN QUALITY LETS YOU KEEP IT

...THE STEWART-WARNER-WINKLER OIL-FIRED FURNACE

Equipped with Winkler *LP* low pressure Burner

A triumph of creative designing which combines efficiency and dependability with clean-lined, modern beauty! In its Imperial Sapphire and Horizon Blue jacket this oil furnace is a fast seller, because its top quality is apparent in every detail.

Outstanding among its features is the heat exchanger with 42% more heating surface and a 10 year guarantee. The new-design blower, too, has a very large air moving capacity which enables it to operate *quietly* at slow speed. No metal-to-metal contact—the blower literally floats on soft yet tough rubber mountings.

Available in basement, vertical, counterflow and horizontal models, all adaptable to summer cooling with Stewart-Warner equipment.

...THE WINKLER *LP* LOW PRESSURE OIL BURNER

Famous for fuel savings as great as 50%

Noted designers have styled the LP Burner in the most modern manner...skilled engineers have developed *low pressure* operation to a peak of oil-burning efficiency. Under its sleek jacket is the most effective combination of design features ever devised for providing low-cost heating. The LP burner now includes the new Heat-Keeper, an exclusive, fuel-saving feature. Non-clog nozzle is guaranteed for 10 years.

•

Why not join up with an organization known for quality products, integrity of operation and permanence. Write today for information on the Stewart-Warner-Winkler Direct Factory Franchise... it could be the smartest move you've ever made!

Symbol of SW Excellence

STEWART-WARNER

HEATING AND AIR CONDITIONING DIVISION

Dept. H-40, Lebanon, Indiana

Fuel oil & oil heat

District sales Managers named by Stewart-Warner

FOUR DISTRICT sales managers have been appointed by the Stewart-Warner Heating and Air Conditioning Division.

The appointees and their territories are as follows: Warren H. Melgaard, Wisconsin and Northern Illinois; Harry Y. Radine, Detroit and four surrounding counties; I. G. Brownlee, central Indiana; and William G. Momeny, Chicago, Evanston and western suburbs.

Outguessing Weatherman wins General Electric Contest

TWO SERVICEMEN have won a seven-day, expense-paid Florida vacation in the nationwide "Be a Weatherman Contest" sponsored by the Appliance Control Department, General Electric Co., through its heating control distributors.

To win the contest James L. Carr, Chicago, and Richard C. Whitehurst, Wonewoc, Wis., predicted the inches of snow that would fall at Stampede Pass, Washington, from December 1 until January 15, as well as the lowest temperature recorded on January 15 at Mt. Washington Observatory, New Hampshire.

Duplicate prizes were awarded when both Carr and Whitehurst entered identical winning guesses. Control service centers, Robert T. Barclay, Inc., Chicago, and Wisconsin Furnace Co., Madison, Wis., sponsoring the winners also were awarded trips to Florida.

Gulf issues direct mail Program for its Dealers

A COMPREHENSIVE direct mail program for its branded heating oil dealers has been developed by Gulf Oil Corp.

The kit features mailers on heating service plans, budget payment programs, fueloil, special promotions and a complete selection of agreement forms.

Each of the direct mail pieces has room for the dealer's imprint and many include a business reply card.

Among the specialty items included are giveaway bridge score and tally sheets with dealer imprint, a burner tag saying: "Welcome to your new home," a furnace or tank sticker giving directions on what to do if your burner stops; a doorknob hanger-pouch in which the delivery man can leave an invoice; and an oversize postcard cautioning: "Drive with care."

Trouble shooting Guide published by Sid Harvey

A BOOKLET, Sid Harvey's trouble shooting Guide, has been published by Sid Harvey, Inc., Valley Stream, N. Y. It contains information for servicemen.

Topics covered include: field checks for stack relays and fuel units, hard to find facts on servicing rotary and low pressure burners, and selection of proper size tankless heater plus boiler water feeder information.

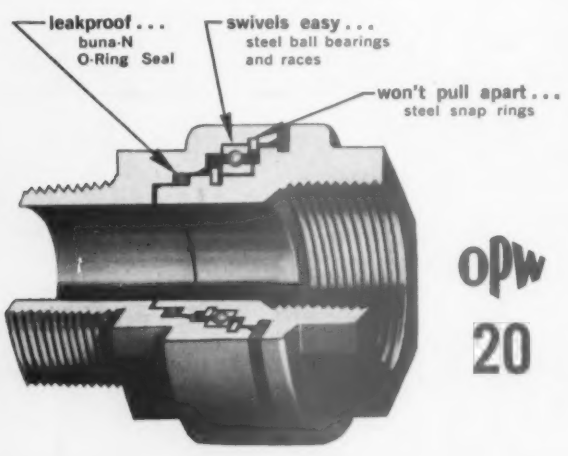
The booklet tells how to install and adjust the Shell head and there is electrical data, control circuits, heat acceleration data, thermostat installation and clock thermostat instruction.

The guide is available to the trade at the cost of printing and handling.

Strike at Carrier aims at a Settlement by April 15

CARRIER CORP. and United Steelworkers officials have set April 15th as a target date by which to arrive at a new contract between the union and the company. Output was halted at Carrier's Syracuse, N. Y., plant early in March when the men walked off the job after the company took disciplinary action against five local union officials for allegedly interfering with production.

Crux of the conflict was union resistance to overtime work on the ground that Carrier was "stockpiling." The company refuted the charge by pointing out that overtime production work was common throughout the airconditioning industry at this time of year. Sentiment for a quick settlement appears to be widespread on both sides, according to observers in Syracuse.



NEW FUEL OIL HOSE SWIVEL with BALL BEARINGS

It's the new OPW 20 Swivel . . . swivels easy—real easy. Has precision steel ball bearings and races. OPW 20 on a nozzle is like power steering on a car—gives smooth, effortless control. Leakproof (guaranteed!) Won't pull apart (that's guaranteed, too). You'll never have to repair it—there's a factory rebuilt swivel exchange program. A good deal. Details in Bulletin NP-20. Write today.

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OPW CORPORATION

Valves, Fittings, Assemblies for Handling Hazardous Liquids

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NEPTUNE PETROLEUM METERS

Complete Truck Metering System in One Weight and Space Saving Unit

Nothing extra to buy...only 3 connections to make

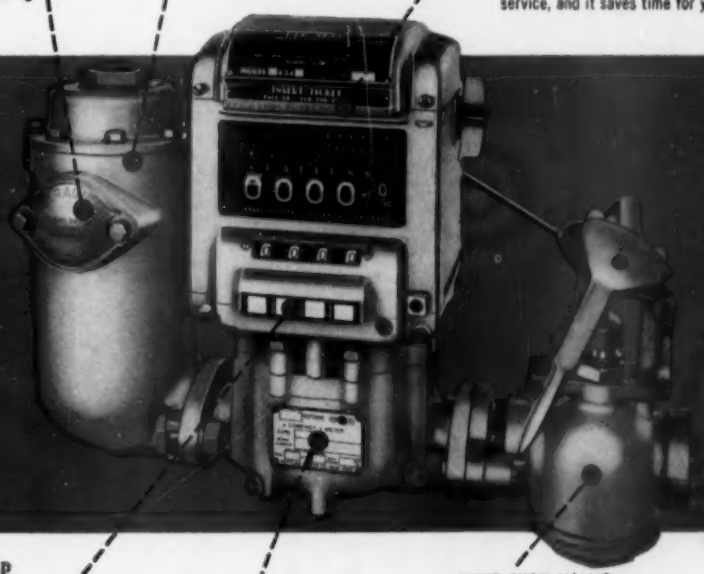
Only Nepture gives you *all* these features in so little space, with so little weight. Everything's built into one compact unit...a complete metering system. Most Neptunes can be assembled with right-hand, left-hand or angle flow, so they pack neatly into any position in the compartment.

Neptune meters permit more pay-load...with no "extras" or accessories to buy...less chance for leaks...less chance for improper installation.

Add Neptune's fine reputation for sustained accuracy and you have the big reasons why this Neptune meter is the oil marketer's most sought-after business friend.

All sizes. Ask your Neptune Equipment Jobber or Tank Truck Manufacturer for details.

Look what's built into your NEPTUNE...



STRAINER:
Removes sediment, scale and dirt from liquid, averting stoppages and preventing undue wear or damage to meter. Easy access for cleaning.

AIR RELEASE:
This patented Neptune design removes air that may be entrained or sucked into liquid before it enters the meter. High efficiency is absolutely necessary for accuracy.

PRINT-O-METER:
Automatically provides a meter-printed receipt showing number of gallons delivered. Customers appreciate this proof of honest service, and it saves time for you.

AUTO-STOP QUANTITY CONTROL:
Operator sets register for any desired quantity by pushing these buttons. Tripping device actuates Auto-Stop Valve automatically when pre-set gallonage is delivered.

MEASURING CHAMBER:
Positive displacement type. Only one moving element. Measures liquid by volume. Most widely preferred for sustained accuracy and long life.

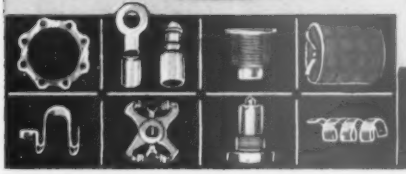
AUTO-STOP VALVE:
Automatically shuts off flow when correct quantity has been delivered. Actuated by tripping mechanism in Auto-Stop register. Avoids spillage and overmeasure. Double-trip valves on larger meters shut off high flow smoothly, quietly, with high accuracy.

NEPTUNE METER COMPANY **neptune** 19 West 50th St., New York 20

for a better measure of profit

BRANCHES AND JOBBERS IN ALL PRINCIPAL AMERICAN CITIES

Servicing Oil Burners ? YOU NEED THIS FREE Catalog



handy 20 page Catalog chock-full of popular REPLACEMENT PARTS and SERVICE TOOLS to make your servicing easier.

- FUEL UNIT PARTS
- CONTROL PARTS
- CIRCULATOR PARTS
- SHAFT SEALS
- STRAINERS
- GASKETS
- IGNITION TERMINALS

Your friendly Oil Burner Jobber stocks the HYDROVALVE Line.
Ask him for a copy of Catalog #60, or write direct.

Hydrovalve CO., INC.
1319 Utica Avenue, Brooklyn 3, N. Y. / BUckminster 4-1330

Customers are Warm friends

(*Begins on page 62*)

New and "key man" drivers go to school together, with much of the technical end of the training being done by the Orlando Police Department and the Florida Highway Patrol. Several civic and business leaders are invited to talk to the men, and radio, TV and newspaper people explain the advertising and public relations program to them. The Police Training School written exams are given, with passing grades being required as a prerequisite for employment.

Johnson backs up his safety program by giving each driver $100 at the beginning of each winter season, depositing the money to their own "safety account." Any chargeable accident, property damage, or customer complaint is deducted from his $100. At the end of the season he gets what is left for a "safety bonus." Each case must be "tried" by a "jury" of drivers who have the final decision as to the responsibility in each case. The "accused" is allowed to present his evidence and cite safety rules and regulations in his defense, but the "jury" has a long record of being harsh in the rulings against safety violations.

"Our petty claims have been almost completely eliminated and our total property damage losses have been under $500 for the past five years," Johnson claims.

Unique in Johnson's operations are the five bulk terminals the company has located on the outskirts of Orlando and Winter Park. Each terminal holds from 25,000 to 45,000 gallons, so located that it can be used by two or more trucks. Developed to beat the rising tide of municipal traffic, Johnson has found other dividends in higher unit delivery per truck, lower driver fatigue, lower accident ratio, and quicker customer service.

But increasing the efficiency in order taking and decreasing the time necessary for delivery present the company with an ever-increasing problem in accounting procedure. Under the direction of Comptroller Sam Holloway, the organization found it necessary to update and invent new procedures to keep up with increased sales.

The accounting department has moved from monthly to cycle billing. In rapid succession followed postcard billing, color sorting of delivery tickets, and on the spot billing and tear-off delivery tickets.

Drivers complete the delivery ticket, extend the amount due for the delivery, and leave the duplicate with the customer, the ticket being designed to look as much like an invoice as possible. The top portion of the ticket is perforated above the words "Detach and return above stub with your payment."

"These few words increased our payments before billing by 40%," says Holloway, "and when our customers started sending the tops of their delivery ticket back to us we started using them as media for recording payments."

The company uses two Burroughs Sensimatic machines for billing and files accounting media directly into the ledger cards without benefit of the

CORRECT

CROMWELL'S Fuel Oil Dealer Forms: Budget Envelopes, Meter Tickets, Invoices . . . make record-keeping accurate and easy. Imprinted with your name, fast delivery, free catalog.

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CHURCH AT BLEECKER, ALBANY, N. Y.

C C C

"Will it solve YOUR problems?"

Shhhhhh!

only this much more

buys this much difference

The little extra you pay for Purolator filters buys features and performance you just don't get in ordinary filters. The picture shows you the difference; here's what this difference means to you:

❶ Nozzles last longer because the Purolator Micronic element filters out abrasive particles as small as 0.0005 of an inch. A waste-type filter medium, no matter how much it's compressed, simply can't filter that fine, even when it's new.

❷ Filters last longer (a year or more without servicing) because every Purolator filter has over 200 square inches of filtering surface, enough to filter over 7,000 gallons of fuel oil without replacement.

❸ No channeling or unloading, ever, because the Micronic element is precision made from a single pleated sheet of resin impregnated cellulose that resists water and acid, won't shrink, stretch, distort, flake or deteriorate.

❹ No spillage, no air leaks. The depressed head on the Purolator housing eliminates spillage when servicing. The recessed gasket seal makes an airtight fitting between case and head.

And because Purolator filters filter better, longer, you make fewer trips, have fewer problems fulfilling your service contract. For full information, write to Dept. 2577.

Filtration For Every Known Fluid

PUROLATOR

PRODUCTS, INC.

RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

fueloil & oilheat

A First From Honeywell!

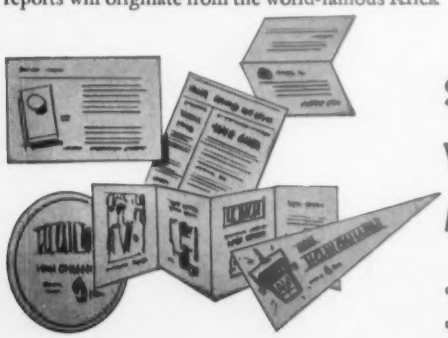
Hot Weather Selling Power Months Before It Happens!

Tie Your Air Conditioning Sales to Hot Weather Forecasts that Pre-sell All Your Best Prospects

For the first time, you can combat the old "wait and see" attitude in the air conditioning business! Up to 3 months before the normal selling season starts, you can now point to accurate, dependable hot weather forecasts, and really convince prospects of the need for central, year-round air conditioning.

Starting April 3, the Honeywell Weather Watch on NBC's popular Monitor Radio program will broadcast scientific summer-ahead weather reports coast to coast. Every weekend for 6 weeks, these reports will originate from the world-famous Krick Weather Center in Denver, Colorado. And each broadcast will give you just the information you need to beef-up your selling story—multiply sales and profits! Catch the broadcasts yourself. Sundays at 3:05 P.M., 4:05 P.M. and 5:05 P.M., N.Y. time.

Plan now to tie-in with the Honeywell Weather Watch, and extend your selling season up to 3 full months! Ask your prime air conditioning prospects from among the vast Monitor audience to beat the heat early—to call you *before* the full force of summer heat is upon us.



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- WINDOW BANNERS
- CONSUMER STUFFERS
- NEWSPAPER MATS

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On Your Own Local Radio Station!

RELIABLE WEATHER FORECASTS FROM WORLD-FAMOUS KRICK WEATHER SERVICE

Dr. Irving P. Krick, President of Irving P. Krick Associates, Denver, Colorado, ranks as one of the world's outstanding meteorologists. With electronic computers and a scientific system of calculating rhythms in the weather, he has brought weather forecasting to a high degree of perfection. Dr. Krick's seasonal clients number in the hundreds, ranging from home builders to major corporations and the 1960 Winter Olympics. Almost all have success stories resulting from Krick predictions.

COAST TO COAST ON ALL THE MONITOR STATIONS

Albuquerque, N.M.—KOB
Alexandria, La.—KSYL
Allentown, Pa.—WSAN
Alpena, Mich.—WATZ
Alpine, Tex.—KVLF
Amarillo, Tex.—KGNC
Atlanta, Ga.—WSB
Augusta, Ga.—WBIA
Augusta, Me.—WRDO

Bakersfield, Calif.—KGEE
Baltimore, Md.—WBAL
Bangor, Me.—WLBZ
Baton Rouge, La.—WJBO
Battle Creek, Mich.—WBCK
Billings, Mont.—KGHL
Binghamton, N.Y.—WINR
Birmingham, Ala.—WAPI
Bismarck, N.D.—KFYR
Bluefield, W. Va.—WHIS
Boise, Idaho—KIDO
Boston, Mass.—WEZE
Bozeman, Mont.—KXXL
Bristol, Tenn.—Va.—WOPI
Buffalo, N.Y.—WGR
Butte, Mont.—KXLF

Cadillac, Mich.—WATT
Calais, Me.—WQDY
Charleston, S.C.—WTMA
Charleston, W. Va.—WKAZ
Charlotte, N.C.—WSOC
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Chattanooga, Tenn.—WDEF
Chicago, Ill.—WMAQ
Cincinnati, Ohio—WLW
Clarksburg, W. Va.—WBOY
Cleveland, Ohio—WJW
Columbia, S.C.—WIS
Columbus, Ga.—WDAK
Cumberland, Md.—WTVO

Dallas, Tex.—WFAA
Davenport, Ia.—WOC
Denver, Colo.—KOA
Des Moines, Ia.—WHO
Detroit, Mich.—WWJ
Douglas, Ariz.—KAWT
Duluth, Minn.-Superior, Wis.—WDSM

Easton, Pa.—WEST
Eau Claire, Wis.—WEAQ
Elkhart, Ind.—WTRC
Elmira, N.Y.—WENY
El Paso, Tex—KTSM
Eugene, Ore.—KUGN
Evansville, Ind.—WGBF
Fargo, N.D.—WDAY

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Fort Pierce, Fla.—WIRA
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Fort Worth, Texas—WBAP
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Globe, Ariz.—KIKO
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Great Falls, Mont.—KXLK
Greenville, S. Car.—WFBC
Greenwood, Miss.—WGRM
Greenwood, S. Car.—WCRS

Hampton, Va.—WVEZ
Harrisburg, Pa.—WKBO
Harrisonburg, Va.—WSVA
Hartford, Conn.—WTIC
Hattiesburg, Miss.—WFOR
Havre, Mont.—KOJM
Hazleton, Pa.—WAZL
Helena, Mont.—KXLJ
Hibbing, Minn.—WMFG
Houghton, Mich.—WHDF
Houston, Texas—KPRC
Huntington, W. Va-Ashland, Ky.—WSAZ
Hutchison, Kans.—KWBW

Indianapolis, Ind.—WIRE

Jackson, Miss.—WJDX
Jacksonville, Fla.—WJAX
Johnstown, Pa.—WJAC

Kalispell, Mont.—KGEZ
Kansas City, Mo.—WDAF
Kingsport, Tenn.—WKPT
Knoxville, Tenn.—WATE

La Crosse, Wis.—WKBH
Lafayette, La—KVOL
Lake Charles, La.—KPLC
Lakeland, Fla.—WLAK
Lancaster, Pa.—WGAL
Lansing, Mich.—WJIM
Laurel, Miss.—WAML
Lewiston, Pa.—WMRF
Lexington, Va.—WREL
Little Rock, Ark.—KARK
Los Angeles, Calif.—KFI
Louisville, Ky.—WAVE
Lubbock, Texas—KCBD

Madison, Wis.—WIBA
Manchester, N. H.—WGIR
Mankato, Minn.—KYSM
Marietta, Ohio—WMOA
Marinette, Wis.—WMAM
Martinsville, Va.—WMVA

Medford, Ore.—KMED
Memphis, Tenn.—WMC
Miami, Fla.—WCKR
Milwaukee, Wis.—WTMJ
Minneapolis, Minn.—See St. Paul
Missoula, Mont.—KXLL
Mobile, Ala.—WALA
Monroe, La.—KMLB
Montgomery, Ala.—WHHY
Morgantown, W. Va.—WAJR

Nashville, Tenn.—WSM
Natchez, Miss.—WMIS
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New York, N. Y.—WRCA
North Platte, Neb.—KODY

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Orange, Va.—WJMA
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Pensacola, Fla.—WCOA
Peoria, Ill.—WEEK
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Pittsburgh, Pa.—WAMP
Pocatello, Idaho—KSEI
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St. Louis, Mo.—KSD
St. Paul, Minn.—KSTP
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Salt Lake City, Utah—KCPX
San Antonio, Tex.—WOAI
San Diego, Calif.—KFSD
San Francisco, Calif.—KNBC
Santa Barbara, Calif.—KTMS
Savannah, Ga.—WSAV
Schenectady-Albany-Troy, N.Y.—WGY
Scranton, Pa.—WSCR
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Tulsa, Okla.—KVOO
Twin Falls, Idaho—KTFI

Virginia, Minn.—WHLB
Washington, D.C.—WRC
Wausau, Wis.—WSAU
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West Palm Beach, Fla.—WEAT
Wilkes-Barre, Pa.—WBRE
Williamsport, Pa.—WRAK
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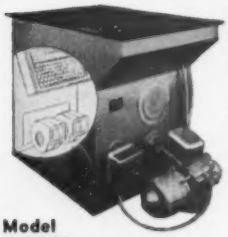
First in Control

75th YEAR — PIONEERING THE FUTURE — SINCE 1885

fuel oil & oilheat



FLOOR FURNACE with a FILTER

ONLY G/A HAS THESE ADVANTAGES

- 30" HIGH . . . 16½" below joist.
- INSULATED JACKET
- CIRCULATED, FILTERED AIR
- QUIET OPERATION
- RETURN AIR OPENING . . . to facilitate a return-duct if used.
- EASY ACCESS for filter removal or furnace service from top.
- PRE-ASSEMBLED & WIRED

Model C-85-FB OIL-FIRED 85,000 Btu Output

GENERAL AUTOMATIC PRODUCTS CORPORATION

2300 Sinclair Lane
Baltimore 13, Md.
EAstern 7-7703

Get the complete story . . . CALL, WRITE OR WIRE NOW:

usual cycle billing "jackets." Since postcards are used in billing, customers are not furnished with an extra copy of their delivery ticket.

Over a period of years, the company has developed a special design for its home delivery equipment that fits this operation. Each truck is equipped with a special twin metering system with meters located in bucket boxes in the rear and on the right side. The design permits the driver to service customers on either side of the street without turning around. Each hose reel carries 150 to 165 feet of one-inch hose and can deliver 27 to 35 gpm to the customer.

To keep his equipment rolling 12 hours a day, Johnson keeps one full-time mechanic on duty at all times. Each truck, as it enters the main yard for its final loading, drives through the truck service area. Here the driver leaves it with an attendant to whom he reports all minor adjustments needed. All corrections are made before the truck is loaded and parked for the night. Secondary maintenance is performed in the company service pits and major overhaul is sent to local garages for completion.

"We like to solve our maintenance problems with a screwdriver and a pair of pliers," says Charlie Wood, Sr. "The small problem you don't attend to when it is small can cost you a major overhaul. A good piece of equipment doesn't have to be babied, but preventive maintenance can lengthen the life of a truck."

When asked to cite his biggest problem, Wood had to give the matter some thought. "Keeping motors tuned up and batteries in full charge would head the list. We turn these motors on at 6:00 or 6:30 AM and seldom turn them off until 8:00 PM. They have to be tuned up and the batteries have to be in good shape to stand up under the pounding the hose reels give them. There is no easy solution. You live with the equipment.

"We learned another lesson years ago, and that is that a safe driver doesn't have maintenance problems. We assign a truck to a driver and no one else is allowed to drive it. This ends all arguments as to who caused what trouble. It gives the men a sense of pride in their equipment."

Focal point of the entire operation is L. A. Johnson's personality and knowledge of the fueloil business and human relations. Johnson describes his as an effortless operation.

"I started in the oil business as a grease monkey in an independent service station in a small town in Indiana, and the day hasn't passed when I haven't marveled at the way people can work together for a common goal if they are given the right kind of conditions and atmosphere.

"Today we're getting stiffer competition than ever before from the gas utility, the electric company, and our own Federal government in the form of new and higher taxes. But we'll survive. Someone will come up with a better way to do it and we'll all benefit from the results. And it may sound corny to say that working the problems out will be fun, but it will be. When the day comes that I don't get a thrill from seeing a pretty piece of equipment delivering oil to a neat, trim home, that's the day I'll be dead."

McLARTY DRAFT BOOSTERS

Most Powerful in the Business, YET ADJUSTABLE AND QUIET

Ventilated Plates

KEEP MOTOR COOL Enough for Rubber Mounting

No Special Oil Needed for Cool Enough Motor Bearings

Sizes 6",7",8",9",10"

McLARTY SYSTEMS

2550 Dickman Rd., Battle Creek, Michigan

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"What does it do?"

Shhhhhh!

IF YOU THINK YOU HAVE TO PAY FOR A BIG MOTOR TO GET A BIG VAC YOU HAVE A FREE THINK COMING

and here it is

A lot of vacs use high priced horsepower fighting dirt through a stuffed up filter. This one doesn't waste its breath. The filter is three times ordinary size, and the vac cleans all day without clogging. Thus a smaller, less expensive motor throws all its weight into the work; you get lean, hard muscled performance and a price that's close to the bone: $175.00. ☛ Cleans faster than a man can work ☛ Disposable paper filter protects permanent filter ☛ New Safety-flow filter available, resists flame, acid, mildew ☛ White enamel finish easy to care for, sells clean service to customer. Only Premier offers a complete line of equipment made especially for furnace, boiler, and air conditioning cleaning—all accessories and 8 great vacs including the P908 or P1008—three machines in one—and the low priced P950 for dry pickup only. Write for Furnace Trade Brochure and price sheets. See us at Booth 429, International Oil, Heat and Air Conditioning Show.

Some resale distributorships still open on a selective basis. Three pay finance plan and full details available upon request.

The P1009 holds 1½ bushels, weighs 38 lbs.

THE PREMIER COMPANY
755 Woodlawn Avenue • St. Paul 16, Minnesota
35 Gerrard Street • Toronto 2, Canada

PREMIER

fuel oil & oil heat

Throttle Control

(*Starts on page 60*)

"live," the fueloil hose is limp, friendly, and affable . . . easy to handle.

After he has inserted the hose nozzle in the customer's fill box, the truck operator turns on the hose nozzle, starting to deliver fueloil. Instantly, oil starts flowing into the truck's oil pump. Affected by the flow of oil through it, the Monoflo fitting develops a vacuum in the ⅜" copper tubing connecting it to the diaphragm device. The vacuum moves the diaphragm, causing the engine throttle to open to precisely the point that provides engine speed most suitable for pumping off fueloil and making a fast oil delivery.

The truck engine runs at speed higher than idling speed only when fueloil is coming from the hose nozzle . . . and therefore fueloil is entering the truck's oil pump. When the driver turns off his hose nozzle, instantly the truck engine slows down and idles.

The only time there is appreciable pressure on the oil truck's meter, hose, pump, etc. is when the hose nozzle is open.

Harry Giffords told me that he developed his new oil-truck throttle-control after becoming impatient with the crude and primitive one he found being used by many, typical operators of fueloil trucks, owned by his company and other companies.

"One truck driver made an everyday practice of using a clothes pin to keep down the accelerator pedal of his truck," Giffords recalled. "That was as precise as that fellow found he could be in speeding up the truck engine properly for pumping off."

He went on, "Then there are truck operators who first rev up their engines, while they're in the cabs, then throw in their power take-offs. That can wear down or break the power take-off gears.

"Some drivers won't admit pulling 'live' hoses from trucks; they see that in doing this they are wearing out the hoses quickly.

"Many drivers are secretive in general. Questioned about their unloading and hose-handling procedures, they'll think up what they're supposed to do, and they'll explain that they're doing just that, though they're not telling the truth. Ask them questions, and their big point in replying seems to be not to admit a thing."

His new control arrangement, Giffords is finding out, simplifies preparing instructions for drivers of oil trucks. Each truck is individually adjusted for most effective, most efficient operation of its oil pump, taking into account the make and type of pump, the length of the hose, and any other pertinent factors. Then the driver has little to worry about. He needs a minimum of simple instructions.

Use of the venturi arrangement in the pump inlet pipe, Harry Giffords points out, avoids any chances of air from an empty compartment being put through a fueloil meter—in that air entering the Monoflo fitting, or any other venturi fitting, will drop the vacuum developed by the fitting. The engine and oil pump will slow down instantly, signalling the operator of the oil truck.

However, arrangements other than have been described can be used, the inventor goes on. Under certain conditions, it may be best to have the venturi fitting on the output side of the pump. Or the venturi fitting can be eliminated, and the vacuum line can simply be run to a tee in the pump-inlet line. By-the-way, the inventor aims to protect all his rights with respect to patents; the publishing of this report on his inventing and developing these devices is not an indication that he is relinquishing any of his rights.

Advantages

Other advantages of this type of control include:

. . . reducing hydraulic shock hazards, and avoiding hydraulic-shock damage to truck equipment;

. . . preventing damage to butterfly valve parts of oil meters, caused by pockets of air followed by hydraulic shock;

. . . savings in gasoline and engine oil used by trucks, through use of high engine speeds, for pumping, only when the hose nozzle is open;

for dry jet fuels to gummy asphalts....

Granco® PUMPS WIDE

←—— VISCOSITY RANGE ——→

LONG

←—— LIFE EXPECTANCY ——→

THE RIGHT DIMENSIONS to handle all your pumping needs! No viscosity is out of range for this positive displacement pump . . . if it flows, GRANCO CAN PUMP IT!

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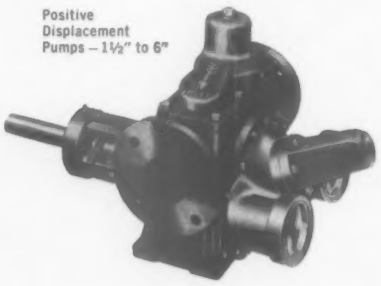

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Reduces Service Calls!

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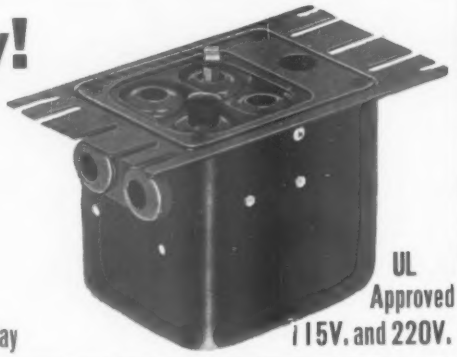

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UL Approved 115V. and 220V.

. . . driver is always at the fill box when oil is going into the customer's tank; he does not have to stand halfway between the truck and the fill box, as many drivers have had the habit of doing. Because he is always at the fill box making the actual delivery of oil, he can easily hear a vent whistle, as he should;

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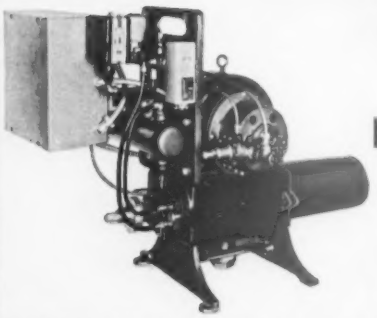
No. 4 OIL BURNER by ELECTROL fully automatic



ELECTROL HO Series Oil Burners are designed specifically to burn No. 4 fuel oil and feature:

- No moving arms and rods, special pumps, or heaters.
- Famous Electrol Cut-off Valve prevents after-drip.
- Hot oil at nozzle on every burner start.
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WORLD'S MOST ACCURATE DRAFT CONTROL

GUARANTEES CONSTANT DRAFT

and protects your heater against draft variables that destroy efficiency!

NOW AVAILABLE

in 6", 7", 8", 9" and LARGER SIZES up to 24". All available with or without TEE section.

TOPS in ability to hold draft yet the EASIEST to install.

NO WEIGHTS TO ADJUST

Can be properly set, even without instruments.

OPERATE YOUR HEATER AT PEAK EFFICIENCY WITH ACCURATE DRAFT CONTROL

BOSTON DRAFT STABILIZER

1. Slows down travel of gases thru the heater to a desired CONSTANT speed so heater can absorb the heat before it reaches the stack.
2. Holds a constant draft because variations in draft-pull result in changes of air delivery from the burner fan, causing changes in smoke content and CO_2 of your combustion.

Write for complete details

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Oil Heating Supplies Div.
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SPEED KLEEN®

to have advantages no other filling system offers

John W. Koch is treasurer of Penna. Independent Oil Co., one of Allentown's leading fuel oil suppliers. Like hundreds of leading distributors he is saving money with the Speed Kleen tight-fill system.

"DELIVERY COST PER GALLON IS ALREADY LOWER"

"We at Penna. Independent Oil Company want to thank your representative, Donald Barley, for convincing us that a changeover to the 'Time Saving Fills Program' would be successful. The money we invested to convert our customers' fills has made it possible to save many man-hours and expenses together with giving our customers assurance of clean delivery. Your help in following through and educating our people in how to get the greatest benefits will long be remembered. So will your technical assistance in changing over some of our trucks so as to further reduce costs through higher pumping speeds."

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- ★ Guidance in setting up modern methods for office and deliveries
- ★ On-the-job employee training
- ★ Free driver educational program at York, Pa.

MORE PROFIT ON EVERY GALLON!

Speed Kleen Fills help boost your profits as they step up your output. You deliver oil *at speeds up to 100 g.p.m.* — safely, cleanly, and with minimum effort! Let us prove how Time Saving Fills Program can save you as much as $5.00 per customer a year. Write or phone for the facts today!

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Klemm MICRO FUEL OIL FILTERS

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1. Practically no flow resistance—true depth filtration.
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39-30F 58 ST., WOODSIDE 77, N. Y.

How to sell 'em nice

(*Begins on page 43*)

avoiding its franchise tax. The promotion will tell the public that local businessmen (like fueloil distributors) pay their taxes while the gas utility escapes some of its.

The Pittsfield, Mass., dealers manage to use the fraudulent claims of the gas people to bring in business. The group uses the theme, "Make them put it in writing" in advertising.

Gas companies are required to make annual reports to the Public Utility Commission. These are very detailed on business operations as well as new installations. The report has been used as a method to evaluate the success of the Hartford program. It also alerts the group to future trouble spots.

From the report was learned that one utility had bought a fueloil company and was making a handsome profit on its investment; three small gas companies bought a company to sell equipment.

As natural gas invades parts of New England, old facilities to make manufactured gas are useless. One utility hopes to solve this surplus by changing over to a central steam plant. This plant would pipe steam into a large redevelopment area for heating and cooling.

Commercial-Industrial Selling

(*Begins on page 75*)

ency (see above) will be as high or higher. Gas produces nearly twice as much water vapor as oil and if stack temperatures are too low, water condenses in the stack and flows back into the breeching.

"*Utility Statement*: Gas equipment is service free.

"*Answer*: Obviously ridiculous. The vast majority of trouble with either type of equipment is the electronic controls. They are the same for both.

"*Utility Statement*: Water vapor condenses in oil tanks, settles and causes malfunctioning equipment.

"*Answer*: U. S. Bureau of Mines survey of Burner Fuel Oils reports .00% average water and sediment on #2 oil. There may be a very slight condensation within a tank but this is burned off as formed and does not effect the equipment.

"*Utility Statement*: Gas is safer than oil. National Fire Protection Association in 1957 reported about 58,000 oil and about 12,000 gas fires.

"*Answer*: This is improper use of the figures of NFPA. We have on file a letter from them stating that they have so notified the utility but in spite of this the R.G.&E. continues to quote these figures.

"*Utility Statement*: Oil varies widely in Btu content.

"*Answer*: Over the entire range of different grades of oil from kerosene to #6 residual there is a wide variation in Btu content. Within each grade the range is usually within +1%. Gas also varies in Btu content.

"*Utility Statement*: Gas is more dependable of supply than oil.

"*Answer*: We have all read of gas pipeline breaks or shutdowns that leave thousands without heat. In this area we have had shutdowns in LeRoy, Lima, Bath, Oswego and the north country. In addition to shutdowns, gas is subject to pressure drops. Gas is the least dependable of fuels. Oil may be stored at the using site; gas may not.

"*Utility Statement*: Oil smells bad. Gas doesn't.

"*Answer*: By law gas is given an unpleasant odor as a safety precaution. This is done to give you a sporting chance to run before flying.

"*Utility Statement*: Gas is supplied on one straight space heating rate. Oil prices fluctuate.

"*Answer*: Each month the gas heat user must go through a series of rate blocks that may total as many as six. The charts and graphs supplied by this association show that for home use gas will cost from 22% to 150% more than oil. The cost of gas heat varies every month. Oil prices vary from periods of peak demand to periods of low demand because we operate in a competitive free market. It is fair to say that in periods of low demand we offer the customer an opportunity to buy and store fuel at a reduced off season price.

"P.S. The new Cobbles School will be heated with oil."

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Precision Measurement with Pre-set Control

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It's just like adding a helper. Tokheim Meter Model 635 tends the truck while driver tends the nozzle. Set gallonage in advance—Pre-set Control lets product flow at 40 g.p.m. Then, within three seconds of full delivery, it smoothly, automatically reduces to secondary flow of 11 g.p.m. Gently cushions automatic stop—eliminates shock and strain on equipment. Exclusive, lever-type wheel settings accurately measure and record the totals of all the gallonage delivered.

The extreme flexibility of Tokheim meters makes them ideal for either single or dual installations. Air separator and strainer are reversible. Ticket Printer is optional. And unit is equally efficient for tank trucks, bulk plants, airports or industry. Investigate Precision Measurement with Pre-set Flow Control today! See your Tokheim representative, or write factory for literature.

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SERVICE MANAGER—leading Fuel Oil Company—Long Island—seeking capable man with good knowledge No. 2 and No. 4 oil burners. Must be qualified to supervise large staff of servicemen and dispatchers. Excellent opportunity. Attractive salary—Pension—other Benefits. Write in confidence. Box No. 1500.

SERVICE MANAGER. Executive type, thoroughly experienced to handle service department for domestic and industrial burners. Location in Southern Connecticut. Send resume with experience and salary expected. Box No. 1499.

PLAN FOR PROFITS with a complete line of oil and gas Warm Air Furnaces and Air Cooling Units . . . many models, types and sizes. Trouble-free, compact, easy-to-install units . . . backed by years of business-satisfied customers. Sales aids, literature available. New Plan offers highest commissions, best discounts, account protection and sales assistance. Write Now! List lines and territories in resume. Address Box No. 1497.

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MANUFACTURERS' REPRESENTATIVES covering plumbing & heating wholesalers. Manufacturer of complete line of Domestic Steel Boilers, offering completely packaged or standard units, is seeking additional representation. Various territories open. Reply with resume for full particulars. Box No. 1507.

DOES YOUR DELIVERY SYSTEM ALWAYS PERMIT MAXIMUM FILL? The Hidy Degree-Day Recorder provides a constant K-Factor for every customer. Assures accuracy in your degree-day system—even in highly variable spring and fall weather. Accurate to your locality. Reads and interprets every measurable factor affecting degree-day count. Cuts trucking and bookkeeping costs up to 30%. Makes it really possible to schedule deliveries. Your degree day system needs the Hidy Degree-Day Recorder. Write for free details in booklet April CFA today. Please tell us if you are now using a degree day system. The Hidy-Brown Recorder Co., 6988 Five Mile Road, Cincinnati 30, Ohio.

MANUFACTURER'S REPRESENTATIVES WANTED! "Dynatherm's on the Move"—and that can mean but one thing—soon the entire United States will be the market for "America's most efficient, completely engineered Oil Heat Package Unit"! Yes—"Dynatherm's on the Move"! Manufactured by one of the oldest and soundest manufacturing establishments in the country, with better than 30 years experience in oil burning theory and practice, Dynatherm has been acclaimed the outstanding domestic heating unit in the East for many years. And—Dynatherm actually has no competition—anywhere! Now—we're expanding our sales and advertising programs, because—"Dynatherm's on the Move"! If you are presently calling on heating wholesalers and jobbers, are sincere, ambitious and interested in representing us in an exclusive area, we suggest that you write immediately stating qualifications to: Raymond Dietz, Sales Mgr., Dynatherm Division, Bethlehem Foundry & Machine Co., 225 W. Second St., Bethlehem, Penna.

PROGRESSIVE YOUNG ADMINISTRATOR skilled in all phases operations, including engineering, inventory control, customer relations, labor relations, training of servicemen and sales promotion—in search of company with service problems or interested in establishing service department and/or one needing technical direction in field operation. Brochure on request. Reply Box No. 1508.

BUILD A FAVORABLE IMAGE, sell advantages of doing business with your firm, with newsy newspaper column I write for you weekly. Edward Fiske Company, 2 Depot Plaza, White Plains, New York.

WANTED: Late Model fuel oil trucks, must have pump & print meter. Will assume notes on Trucks. Reply Box No. 1509.

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MODEL U-OB

MODEL CF-OB

NEW! Upflow Model U-OB

60" low x 20"-27" wide x 32½" deep

4 sizes: 84,000–95,000–112,000–140,000 Btuh

This brand-new oil-fired winter air conditioner is shipped completely factory-assembled and wired, with burner installed. Burner and controls are completely enclosed in an attractive cabinet that's so compact you can install it almost anywhere—basement, utility room, game room, hallway, alcove.

The small size is made possible by a new-type sectional heat exchanger that gives more heating surface in less space, extracts maximum heat—and gives *you* a strong fuel-economy sales story. Both the primary control—with flame-sensing device in the burner blast tube—and the fan-and-limit control are factory-connected to a single Central Control Station.

NEW! Counterflow Model CF-OB

65" low x 20"-24" wide x 32½" deep

3 sizes: 84,000–95,000–112,000 Btuh

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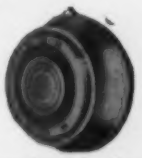

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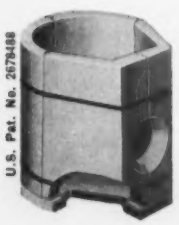

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1. **Working closely with the Industry to meet its progressing needs.**
2. **Constant product improvement through the development of specialized and unique mass production and testing methods and techniques.**

The result: Nozzles unsurpassed in performance, accuracy, uniformity and dependability.

Next time, try *Monarch* Nozzles and see why Service Men and more than 400 Oil Burner and Furnace Manufacturers, world-wide, agree . . . Monarch continues "First Choice of the Industry"!

Precision Machining

Extremely close tolerances and micro-finishes are "musts" in producing accurate, uniform nozzles. Special precision machines designed and manufactured by Monarch permit regular production to tolerances of 1/10,000 of an inch . . . and certain critical dimensions within even closer limits.

Individual Testing

Monarch completely eliminates the need to "try out" several nozzles to find one that fires properly. *Every* Monarch Nozzle is individually tested on *Oil* for Capacity, Spray Angle, Quality of Spray, and Balance! *Individual* testing on *Oil* is your *guarantee* of absolutely uniform performance!

DEALERS: Buy from your Monarch Jobber. Write for Catalog "O"

Monarch
MANUFACTURING WORKS, Inc.
2503 E. ONTARIO ST., PHILADELPHIA 34, PA.
Canadian Agent (Except B. C.)
E. S. Gallagher Sales Ltd., Toronto 12, Canada
Exclusive Agents in all of Europe, Australia and New Zealand

Monarch AIR MIXING EQUIPMENT

COMBUSTION HEADS:

G-81-C Head is as easy to install as an ordinary Air Cone and Stabilizer. Produces high CO_2 with no "adjustments" to get out of order. For 3⅜" or 4" I. D. Air Tubes.

CONVENTIONAL:

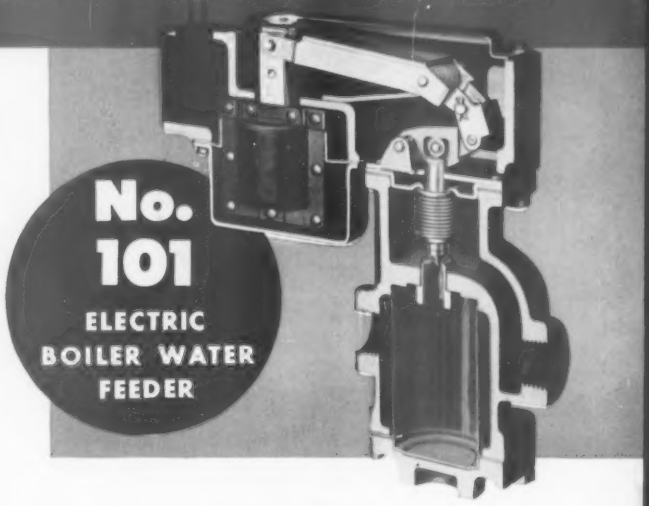
Bladed Cone Rings and four blade Stabilizers for ordinary Air Tube replacement from 3½" to 8" I. D. Also special "Anti-Pulsation" equipment.

Also available: Flame Mirrors, "24" and "48" Nozzle Boxes, Nozzle Wrenches, etc.

GOING STRONGER THAN EVER!

More and more of these Electric Water Feeders are being added to McDonnell Low Water Cut-offs

Here's why:



When you add this No. 101 Electric Water Feeder to a McDonnell No. 67 or 69 Series or any other McDonnell "twin switch" Low Water Cut-off, you kill two birds with one stone:

1 You give owner something he needs and likes—the fully automatic boiler water level control of a combined water feeder and low water cut-off.

2 You end unnecessary shutdowns, and the headaches they cause . . . end them because the No. 101 is right there to keep the boiler going through periods when otherwise the cut-off might stop the burner.

The story is simple: Every McDonnell No. 67 or 69 Series Cut-off is provided with an extra "feeder" switch that is practically shouting for a No. 101. Many No. 101's have been hooked up to these "feeder" switches on oil fired jobs. But despite the fact that they are going stronger every year, the big oil fired market has scarcely been touched.

That is one big field, but it is only half the story. There are also a large number of gas fired boilers, equipped with No. 67 and 69 Series cut-offs. These Cut-offs have been crying in vain for the No. 101 . . . but now comes the good news:

New model with transformer now takes care of the gas boilers

A new and equally effective electric feeder—No. 101-24V—has been developed for gas boilers having low voltage control circuits. It has a special low voltage coil and comes complete with a companion 24V transformer. Regulations prevented wiring line voltage into a terminal box having a low voltage circuit, but the 101-24V completely overcomes this objection by making *both* circuits low voltage.

Note the simplicity of piping and wiring the No. 101. See it on display at your wholesaler's. Ask for latest bulletin.

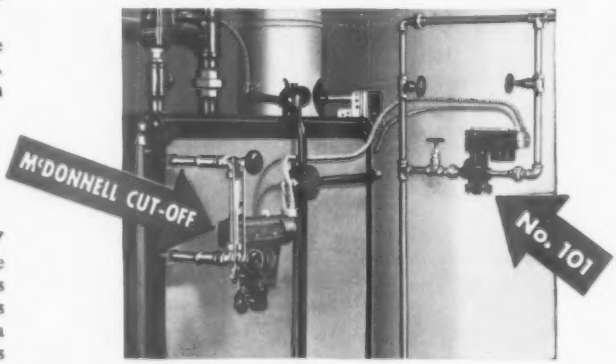
McDONNELL & MILLER, Inc.
3500 N. Spaulding Ave., Chicago 18, Ill.

Doing One Thing Well

Ordinary Solenoid Valves won't do

The No. 101 was specially designed to perform essential functions that cannot be properly handled by a conventional solenoid valve! The No. 101 valve is spring loaded to give it powerful drip-tight closure against any city pressure, and a compound leverage system assures positive valve opening by the solenoid. A button for manual feeding—exclusive feature—facilitates filling, makeup, and testing. It has the same time-tested valve mechanism and built-in strainer found in other McDonnell Feeders. Straight-through ½ inch inlet and outlet pipe connections simplify installation.

No. 101 and 101-24V are for boilers up to 5000 sq. ft. capacity; maximum steam pressure, 25 psi; maximum water supply pressure, 150 psi.



Makes the boiler water level as automatic as the firing

Nothing could be simpler: Simply insert the No. 101 in any horizontal section of cold water piping above or below water level. Wire it into the "feeder" terminals of any McDonnell "twin switch" Cut Off.

Your Jobber

McDONNELL Boiler Water Feeders